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Mass differentiated reading skills instruction in high school

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BOSTON UNIVERSITY
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MASS DIFFERENTIATED READING SKILLS INSTRUCTION IN HIGH SCHOOL

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CHAPTER I

STATEMENT OF THE PROBLEM

I. INTRODUCTION

The Problem. The purpose of this study was to determine if reading skills can be taught to a large number of high school students in a single group and still provide for individual differences in (1) intelligence; (2) level of reading ability; (3) speed of reading; and (4) progress rates.

Delimitation. A large number of high school students in a single group worked with materials to develop the following specific skills: (1) vocabulary development; (2) speed of reading; (3) organizational skills; (4) understanding graphic representations (maps, charts, and graphs); (5) following directions; and (6) critical thinking.

An inexperienced teacher, one who had never taught before, was chosen to handle the class so that the burden of the success of the class would not be directly attributable to the trained skill of the teacher. It was felt that this was a way to try the experimental design under more rigorous conditions.

The program ran for seven weeks, meeting for an hour three times a week. A control group was set up to see whether the students in the program made any gains in excess of the gains made by comparable students at the school.

II. JUSTIFICATION

Teaching a large group of students at once would provide for economy of time and of classroom space. It is easier to schedule one class

than many and fewer teachers would be needed. One reason this kind of a study is needed is because of the growing school population which puts a heavy burden on classroom space and available teachers.

The following table shows the increase of public high school enrollment from 1890 to 1956 and the projected increase for 1960 and 1970.

U.S. PUBLIC HIGH SCHOOL ENROLLMENTS, 1890-1970¹

| YEAR | HIGH SCHOOL ENROLLMENT | PERCENT OF POPULATION Ages 14 to 17 |
|------|------------------------|--|
| | Total | |
| 1890 | 202,963 | 3.8 |
| 1900 | 519,251 | 8.4 |
| 1910 | 915,061 | 12.7 |
| 1920 | 1,851,965 | 23.9 |
| 1930 | 4,135,171 | 44.3 |
| 1938 | 5,926,722 | 59.8 |
| 1946 | 5,417,122 | 60.9 |
| 1952 | 5,695,514 | 65.3 |
| 1956 | 6,120,000 | 64.2 |
| 1960 | 8,620,215 | 70 (estimated) |
| 1970 | 9,412,025 | 75 (estimated) |

The NEA Research Bulletin² reports that in public high schools the 1959 to 1960 enrollment is 5.1 percent higher than the 1958 to 1959 enrollment. From the 1957 to 1958 school year to the 1958 to 1959 school year the enrollment had already gone up 10.7 percent.

Herman G. Richey's³ report shows that over a recent ten year span the number of high school age children in public and private schools has increased almost 10 percent. In 1946, 79.6 percent of high school

¹J. Q. Umstattd and Robert G. Thornton, "Secondary Education-Student Population, Encyclopedia of Educational Research, Macmillan Company, New York, 1960, p. 1273.

²"Spotlighting Public Education in 1960," NEA Research Bulletin (February, 1960) 38, No. I, pp. 18-22.

³Herman G. Richey, "Population Change," Encyclopedia of Educational Research, Macmillan Company, New York, 1960, pp. 1031-38.

age children attended school and in 1956 the figure was 88.2 percent. Not only is the number in the teen age population increasing, but the percentage attending school is also expanding rapidly, and methods must be found to care for this increase within budget limits.

There seem to be too few teachers for the increasing enrollment. The National Elementary Principal⁴ has a chart giving information indicating that in the ten year period from 1947 to 1957 the percentage of pupils in high schools increased 39 percent while the percentage of teachers increased only 33.4 percent. The article concludes that the number of students is increasing faster than the number of teachers.

The NEA Research Bulletin⁵ indicates that 9 states report that there is a small shortage of rural secondary school teachers; 36 states, some shortage; and 1 state, a large shortage. There are 27 states who report a small shortage of urban secondary teachers; 21 states, some shortage; and 27 states, a small shortage.

Fay⁶ says that it is best to have definite people in charge of a reading program. "While the often expressed goal, 'Every teacher a reading teacher,' is certainly desirable, it is also true that everyone's responsibility can soon become no one's."⁷

⁴"If You're Interested in Teacher Supply," The National Elementary Principal (February, 1958), 37, No. 5, p. 43.

⁵"Statistics for 1957-58," NEA Research Bulletin (February, 1958), 36, No. 1, pp. 9-12.

⁶Leo C. Fay, "Reading in the High School," What Research Says to the Teacher, No. 11, (American Educational Research Association of the National Education Association, 1956.)

⁷Ibid. p. 11.

Hunt⁸ expresses the same feeling. He adds that remedial classes do not provide for all those who need help. "A co-ordinated and concentrated program, in which all staff members participate and in which developmental reading is the core, is essential if any appreciable school-wide gain in reading is to develop."⁹

A questionnaire¹⁰ was sent to 88 junior high school principals in May, 1950. According to the replies 60 percent of the principals felt that teachers were not prepared to teach basic reading skills, 29 percent felt that only some teachers were prepared to teach reading, and only 10 percent stated that teachers were prepared for this responsibility.

Early¹¹ says that questionnaire responses from 147 high schools in 1956 showed what kinds of reading programs were in operation. She states that the 147 schools are not a random sampling but were chosen "because leads from various sources suggested that programs might be in effect."¹² The results of the survey show that no program in reading was offered in 52 percent of the schools and in an additional 6 percent only special classes in reading were available.

⁸J. T. Hunt, "What High-School Teachers Should Know About Individual Differences in Reading." School Review (October, 1952) 60. p. 423.

⁹Ibid.

¹⁰The Retarded Reader in the Junior High School, Board of Education, City of New York, Bureau of Educational Research, Publication No. 31 (September, 1952).

¹¹Margaret J. Early, "About Successful Reading Programs," The English Journal (October, 1957) XLVI, No. 7, pp. 395-405.

¹²Ibid.

One can see that although the schools questioned were those thought to have reading programs, even so, the extent of organized programs was not adequate.

Since subject matters teachers are hard pressed to handle their subject areas without teaching reading, other ways of meeting the need for developing reading skills must be found.

Another reason that better ways must be found to provide for individual differences is seen in the wide spread intelligence levels in the high school. Mitchell and Lennon¹³ compiled a table on I.Q.'s in the schools. The high school I.Q. data are reproduced below.

DISTRIBUTION OF I.Q.'S BY GRADES¹⁴

| | <u>Grade IX</u> | <u>Grade X</u> | <u>Grade XI</u> | <u>Grade XII</u> |
|-----------------------------|-----------------|----------------|-----------------|------------------|
| 160-169 | .00% | .00% | .00% | .00% |
| 150-159 | .10 | .08 | .00 | .00 |
| 140-149 | .47 | .61 | .35 | .57 |
| 130-139 | 1.97 | 2.54 | 3.40 | 4.60 |
| 120-129 | 6.20 | 7.12 | 7.57 | 9.68 |
| 110-119 | 15.61 | 17.86 | 19.01 | 20.76 |
| 100-109 | 27.95 | 29.02 | 29.72 | 29.04 |
| 90-99 | 25.30 | 24.14 | 24.09 | 22.62 |
| 80-89 | 14.89 | 12.88 | 11.14 | 9.43 |
| 70-79 | 5.19 | 3.94 | 3.36 | 2.40 |
| 60-69 | 1.74 | 1.33 | .97 | .68 |
| 50-59 | .58 | .48 | .39 | .22 |
| 40-49 | .00 | .00 | .00 | .00 |
| | 100.00 | 100.00 | 100.00 | 100.00 |
| Total Number of Cases | 10,455 | 13,049 | 11,931 | 10,386 |
| Median | 100.3 | 102.0 | 102.8 | 104.5 |
| Mean | 100.6 | 102.1 | 103.2 | 105.2 |

¹³Umstattd and Thornton, op. cit. p. 1280.

¹⁴Ibid.

A cursory view of this data indicates wide variation in intelligence among students in the high schools, complicating the problem of instruction. In all grades there was a range from I.Q.'s of 50-59 to those of 140-149. Although the averages center close to 100 I.Q., the middle fifty percent have a spread in potential performance of four to five grade levels.

Not only is the spread in intelligence levels broad but the spread in reading achievement level is even broader. Kottmeyer¹⁵ says that the Traxler Silent Reading test was given to pupils graduating from eighth grade in the St. Louis Schools in June, 1943. Kottmeyer explains that many tests were given several weeks before the end of the school year. According to a table showing the results of these tests, the range of scores goes from below grade 3 to above grade 13.¹⁶

Hunt¹⁷ says of Kottmeyer's study that just 29 percent of the students read at the grade level in which they were placed. But also no more than 17 percent of the group read at any other level. This means that a teacher preparing a set lesson for a single reading level would meet the needs of no more than 29 percent of her students.

¹⁵ William Kottmeyer, "Improving Reading Instruction in the St. Louis Schools," Elementary School Journal (September, 1944) 45, pp. 33-38.

¹⁶ Ibid. p. 34.

¹⁷ Hunt, op. cit., p. 418

The Board of Education of New York City, Bureau of Educational Research¹⁸ has a table of reading scores showing the results of 29,348 eighth grade junior high school students in New York City tested on February 7, 1951 on the Stanford Reading Test, Intermediate and Advanced Levels, Form F, Test I, 1940 norms. Eleven and two-tenths percent scored 4.9 or below and 7.8 percent scored 12.0 or at the test ceiling. It is pointed out that:

Even the middle 50 percent of the scores is distributed over nearly four reading grades—roughly, the sixth, seventh, eighth and ninth. The range would have been broader and more clearly defined if more advanced tests had been used with the better readers and simpler tests with the poorer readers.¹⁹

A footnote points out, "When children scoring at fourth and fifth grade levels were retested with a more appropriate instrument, many were found to be third grade readers and some virtual 'non-readers'".²⁰

Although authorities²¹ seem to feel that children vary in their progress rates and that provision should be made for these individual differences, there seems to be little or no research on this problem.

¹⁸ Board of Education, City of New York, Bureau of Educational Research, op. cit. p. 6.

¹⁹ Ibid. p. 7.

²⁰ Ibid.

²¹ Arthur I. Gates, Teaching Reading, What Research Says to the Teacher, Department of Classroom Teachers, American Educational Research Association June, 1953). pp. 10-11.

Every teacher is familiar with the problem which varying rates of reading produces. Some students read quickly through the selection and then must wait while others who read more slowly complete the selection. Several authorities as cited by Norman Lewis²² have reported wide spreads both in reading speed and in improvement of reading speed. Provision must be made for meeting the speed variation, if boredom for fast readers and frustration for slow readers is to be prevented.

III. RELATED RESEARCH

It can be seen from Kottmeyer's²³ study mentioned previously in relationship to spread of reading achievement, that many need reading help. Kottmeyer said of the St. Louis students about to enter high school that 21 percent of the white students and 60 percent of the Negro students fell below the seventh grade achievement level which is generally used as the minimum figure students can achieve and still be able to do high school work. Six percent of the Negroes and 0.8 percent of the white children were actually below fourth grade achievement level.

In the New York City study²⁴ of 348 eighth grade students, 11.2 percent scored at 4.9 grade level or below.

²²Norman Lewis, How to Read Better and Faster, Thomas Y. Crowell, New York, 1951. pp. 4-7.

²³Kottmeyer, op. cit. p.33.

²⁴Board of Education, City of New York, Bureau of Educational Research, op. cit. p. 4.

Penty²⁵ reports that of the tenth graders at the Battle Creek, Michigan High School 33 percent read at grade 6 or below, and 21 percent read at grade 4 or 5. Not very many of these poor readers stayed in school until graduation.

In the New York City study²⁶ of May, 1950 which showed that in 88 junior high schools 60 percent of the principals of these schools said that "the problem of the retarded reader was severe; 39 percent said that it was mild. Only one principal in the city reported that the retarded reader problem presented practically no problem in the school." Seventy percent said the retarded reader situation has grown worse; 18 percent that it was not worse; and 6 percent did not answer.

Witherspoon²⁷ found that women make better reading scores than men.

According to Strang,²⁸ physical factors, intelligence and environment are related to reading.

Johnson and Reynolds²⁹ found that intelligence and reading correlated .764.

²⁵ Ruth C. Penty, Reading Ability and High School Drop Outs, Bureau of Publications, Teachers College, Columbia University, New York, 1958, p. 10.

²⁶ Board of Education, City of New York, Bureau of Educational Research, op. cit. p. 51.

²⁷ Younger T. Witherspoon, "Predicting English Grades at the University of Utah," Unpublished Master's thesis, University of Utah, 1951, pp. 25-29.

²⁸ Ruth M. Strang, Problems in the Improvement of Reading in High School and College, The Science Press Printing Company, Lancaster, Pennsylvania, 1938, p. 9.

²⁹ Donald M. Johnson and Floyd Reynolds, "A Factor Analysis of Verbal Ability," The Psychological Record (January, 1941) 4, pp. 183-95.

Fee³⁰ and Hughes³¹ found that all language factors are related to each other.

Maturity and reading ability are related according to Anderson and Morse.³²

Glock³³ found that attitudes, physical health, emotional health, adjustment and study habits were related to reading growth.

William S. Gray³⁴ says:

Research has shown conclusively that children differ in capacity to learn and in other basic characteristics. The need is urgent, therefore, of organizing instruction to provide adequately for the needs of all.

³⁰ Mary Fee, "Functional Grammar and Its Relation to Correct English Usage," Abstract of Doctoral dissertation in Education, pp. 3-4. University of Kansas, 1941. Lawrence, Kansas, 1941. Kansas Studies in Education. No. 6.

³¹ Vergil H. Hughes, "A Study of the Relationships among Selected Language Abilities," Journal of Educational Research (October, 1953) XLVII. pp. 97-106.

³² Irving H. Anderson and William C. Morse, "The Reading of Veterans," Journal of Educational Research (October, 1953) XLVII. pp. 96-106.

³³ Marvin D. Glock, "Eliminating Obstacles to Effective Reading in College," Creative Reading in Classrooms and Clinic (Supplementary Educational Monographs, No. 79, December, 1953, University of Chicago Press, 1953) pp. 71-75.

³⁴ William S. Gray, "The Teaching of Reading," Encyclopedia of Educational Research, The Macmillan Company, New York, 1960.

Strang, McCullough and Traxler³⁵ mention six different kinds of grouping to meet individual needs. They are: 1. achievement - based on child's reading level; 2. research - arranged when children want to learn more about a particular problem; 3. interest - based on interest in a certain topic; 4. special needs - used when pupils need a particular skill; 5. team -- arranged so that a pair work together; 6. tutorial - used when one pupil can teach something he knows to others who need his help.

Durrell and Savignano³⁶ have explored "pupil specialities" a method of grouping which has come to prominence in recent years. In this program each child has a project in his own special interest field which he does during time left over from his regular schoolwork. A six month's study was done in Needham, Massachusetts involving 349 students in grades four, five and six. The students were divided into a group using "pupil specialities" and a control group following the regular program. The values of "pupil specialities" over the control group appeared to be: (1) these pupils wanted to work more closely with their classmates; (2) they made better use of spare time left in class; (3) they made better improvement in work habits; (4) they worked more with their families thus strengthening family ties; and (5) parents thought the program helped the pupil to "work by himself, gain self-confidence, gain valuable information, use time wisely, work with others." There were no special gains in reading skills achievement or in "breadth of interest as measured by vocabulary tests on out-of school topics."

³⁵Ruth Strang, et al. Problems in the Improvement of Reading, McGraw

³⁶Donald D. Durrell and Leonard Savignano, "Classroom Enrichment through Pupil Specialities," Boston University Journal of Education, (February, 1956) 138, No. 3.

It is interesting to notice the lack of achievement in these two areas; one might think that in a program in which each child explored his own interests, gains in these two areas could be expected.

There is a controversy among authorities as to whether grouping should be individualized or not. More research in this area has been done on the elementary level than on the secondary level; both levels, however, need more research to determine both whether reading should be individualized.

Fox and McCullough,³⁷ writing on the elementary level, differ in their views on the merits of individualized reading. Fox says that an individualized reading program is superior to a systematic one. She feels that the children should have choices in books, in whether they read by themselves or with other children, and in other types of work connected with reading. She emphasizes that, "More than anything else, then, individualized reading means clearing the lines of communication between teacher and children."

On the other hand McCullough does not think there is absolute evidence that a whole program of individualized reading is better than a systematic one. She criticizes the way the tests to measure the validity of these programs have been set up. Until we find out -- "have we ..the right to jeopardize the quality of education by widespread use of an unproven method?"

³⁷ Lorene K. Fox and Constance M. McCullough, "Individualizing Reading," NEA Journal (March, 1958), 47, No. 3. pp. 162-63.

Safford³⁸ brings out the interesting point that studies which show that a program in which children choose their own reading materials is superior to the systematic program are set up so "that both children and teachers of the classes involved are keenly aware of the nature and implications of what they were doing."

She suggests studying individualized reading programs which have already been carried out in order to eliminate this problem.

IV. DESCRIPTION OF THE STUDY

Procedure. The program ran for seven weeks and was held on Mondays, Wednesdays and Thursdays from 2:00 to 3:00 P.M. The only room large enough which was available was the cafeteria, and in spite of handicapping factors, this was the room used.

Mr. Oakey, the principal of Lynnfield High School, called an after-school assembly for all eleventh and twelfth graders. He explained the purpose of the program, what it would involve and the regulations concerning it. Attendance, it was explained, was voluntary, but those who signed up were expected to attend regularly. The pupils were given an explanatory sheet for parents and a registration blank.

At the first meeting of the program Dr. Noall, the supervisor of the study, spoke to the students in order to orient them to the purposes and procedures. An informal test for determining reading rates was administered and students entered their rates on their charts and familiarized themselves with the contents of their folders. See Appendix A.

³⁸Alton Safford, "Evaluation of an Individualized Reading Program," The Reading Teacher (April, 1960), 13, No. 4. p. 270.

Population. Lynnfield High School in Lynnfield, Massachusetts was chosen as the school in which the project was to be held for the following reasons: 1. It was close to the Boston area so that there were no transportation or communication difficulties; 2. From 2:00 to 3:00 P.M. was a time when students could get extra academic help. Thus, they were used to this hour as a time for extra-curricular academic activities; 3. The administration and teachers at Lynnfield had expressed interest and willingness to cooperate in this kind of a study. Without their cooperation in every way, the project would have been headed toward failure from the start; and 4. The community rated high in socio-economic background and many students plan on attending college. This would make for student support of the planned program.

Table I provides full statistical data about the experimental and control groups. Some characteristics of the group are as follows: Sixty men and 54 women took part in the program making a total of 114 participants. Of this total, 70 were eleventh graders and 44 twelfth graders. As of January 28, 1960 the average age was 16 years and 8 months. As measured primarily by the Otis Gamma Intelligence Test,³⁹ the average I.Q. was 114.

³⁹ Arthur S. Otis, Otis Quick-Scoring Mental Ability Test: Gamma, New Edition, World Book Company, New York, 1954.

The percentile levels reached by the Lynnfield students on all the tests used indicated distinct superiority over most high school students with relationship to educational achievement, study skills and ability to think critically. On the Iowa Tests of Educational Development,⁴⁰ percentiles were based on middle of the year eleventh-grade national norms, as a large majority of the students were eleventh graders.

⁴⁰ E. F. Lindquist, et al. The Iowa Tests of Educational Development for Grades 9-13. Science Research Associates, Chicago, 1952.

TABLE I

CHARACTERISTICS OF EXPERIMENTAL AND CONTROL GROUPS

| <u>Characteristic Group</u> | <u>Number</u> | <u>Mean</u> | <u>S.D.</u> | <u>Om</u> | <u>C.R.</u> | <u>Level of Significance</u> |
|---|---------------|-------------|--------------|-------------------|----------------------|------------------------------|
| <u>Age:</u> | | | | | | |
| Experimental | 114 | 200.7 | 7.05 | .663 | .598 | Not significant |
| Control | 26 | 202 | 10.33 | 2.07 | | |
| <u>I.Q. Otis Gamma Test</u> | | | | | | |
| Experimental | 114 | 114.17 | 9.6 | .904 | .508 | Not significant |
| Control | 26 | 113.14 | 9.08 | 1.816 | | |
| <u>ITED Tests</u> | | | | | | |
| <u>5. Interpretation-Social Studies</u> | | | | | | |
| Experimental | 113 | 19.13 | 4.87 | .459 | .694 | Not significant |
| Control | 25 | 19.88 | 4.80 | .979 | | |
| <u>6. Interpretation-Natural Sciences</u> | | | | | | |
| Experimental | 113 | 18.7 | 5.38 | .508 | .076 | Not significant |
| Control | 25 | 18.6 | 5.91 | 1.206 | | |
| <u>7. Interpretation-Literature</u> | | | | | | |
| Experimental | 111 | 18.3 | 5.2 | .491 | 1.241 | Not significant |
| Control | 26 | 18.7 | 5.7 | 1.14 | | |
| <u>8. General Vocabulary</u> | | | | | | |
| Experimental | 112 | 20.7 | 4.108 | .390 | .864 | Not significant |
| Control | 26 | 20.08 | 3.86 | .772 | | |
| <u>9. Uses of Information</u> | | | | | | |
| Experimental | 112 | 21.0 | 4.9 | .461 | 2.607 | Not significant |
| Control | 26 | 17.7 | 5.9 | 1.18 | | |
| <u>Sptizer Study Skills Test</u> | | | | | | |
| <u>Test 3, Maps, Charts and Graphs</u> | | | | | | |
| Experimental | 107 | 28.0 | 4.2 | .404 | 1.853 | Not significant |
| Control | 8 | 25.6 | 3.26 | 1.231 | | |
| <u>Test 5, Outlining</u> | | | | | | |
| Experimental | 107 | 29.2 | 8.46 | .821 | | |
| <u>Watson-Glazer</u> | | | | | | |
| Experimental | 58 | 61.9 | 7.06 | .934 | | |
| <hr/> | | | | | | |
| <u>Sex</u> | | <u>Men</u> | <u>Women</u> | <u>Chi-Square</u> | <u>Level of Sig.</u> | |
| Experimental | 60 | 52.6 | 54 | 47.4 | .01706 | Not significant |
| Control | 14 | 53.8 | 12 | 46.2 | | |

Average percentiles of these five tests puts these students at the 74th percentile, just barely below the top quarter of the high school population on which the test was standardized. The percentiles for the Spitzer Study Skills Test⁴¹ are based on end of the year eleventh grade national norms. The results were: Test 3, Understanding Graphs, Tables and Maps, 60th percentile; Test 5, Organization of Facts in Note Taking, 62nd percentile.

On the Watson-Glazer Critical Thinking Appraisal,⁴² the percentile was based on national high school norms. The Lynnfield students scored at the 77th percentile which is almost at the median for the "Freshman College Applicants" described in the test manual.

There was no statistical difference between the scores of the control and experimental groups except on Test 9, Uses of Sources of Information, on the Iowa Tests of Educational Development. The difference was in favor of the experimental group. This kind of material was not provided for in the study; thus this difference was probably not operative in the study. The groups were equated on nine variables of which only one showed a statistical difference.

⁴¹ Herbert F. Spitzer, Spitzer Study Skills Test, World Book Company, New York, 1954.

⁴² Goodwin Watson and Edward Glazer, Watson-Glazer Critical Thinking Appraisal, World Book Company, New York, 1952.

Materials. A public address system and the Mahal Pacer were used as a means of controlling and motivating the students. The public address system was set up to be used for announcements at the beginning of the period and whenever a special announcement needed to be given to the whole group.

The Mahal Pacer⁴³ is an intermittent timing device which can be set to chime at variable time intervals. It helps the students to work independently because it constantly refocusses attention to the task. Because it is an impersonal reminder, it is less threatening to the more sensitive students. It serves to cut down loss of time by getting students started and by permitting variable starting times.

This pacer was in operation all the time so that the students could check their speed on any materials they were using. It was usually set to go off at one minute intervals, although occasionally the three minute interval was used. According to expectations, it was found to be particularly useful with speeded word recognition, the SRA Reading Laboratory and the Reader's Digest.

⁴³The Mahal Pacer, manufactured by Oaktron Industries, Monroe, Wisconsin.

The students were assigned to different materials on the basis of their test scores by checking work levels on the charts in their folders. Folders and charts are thoroughly described in Appendix A. A color code was set up for the different levels of materials. The color for each level was fairly consistent for the different types of materials. Too great concern on the students' part for their exact achievement levels was eliminated by having colors to designate levels. These bright tabs of color were an attractive, motivating device.

Because each type of material is fully described in ensuing chapters, no further description is needed here. The list of materials used to develop the skills follows:

I. SPEED OF READING

Reader's Digest, Reader's Digest Association, Pleasantville, New York; Four issues were used.

II. ORGANIZATION AND STUDY SKILLS

1. Guiler, W. S. and Coleman, J. H., Reading for Meaning. Revised, Chicago: J. B. Lippincott, 1955. Twenty four exercises were used from each of eight workbooks which ranged from grade 5 to grade 12.
2. Herber, Harold, Think? Workbook on Critical Thinking Skills. Lithographed, Boston: Boston University School of Education, 1959.
3. McCall, William A. and Crabbs, Lelah Mae, Standard Test Lessons in Reading. New York: Bureau of Publications, Teachers' College, Columbia University, 1950. Ten units were used from each of the workbooks B, C, D, and E.
4. Parker, Don H., SRA Reading Laboratory, College Edition Chicago: Science Research Associates, Inc., 1959.
5. Strang, Ruth, Study Type of Reading Exercises. Revised Edition. New York: Bureau of Publications, Teacher's College, Columbia University, 1956. All 20 selections were used for outlining.

6. Stroud, James B., Ammons, Robert B., and Bamman, Henry A., Improving Reading Ability, Second edition. New York: Appleton-Century-Crofts, Inc., 1956. The material used included: Speeded Comprehension: Paragraphs, Chapter 6, pp. 77-109 and Speeded Comprehension: Connected Text, Chapter 7, pp. 155-178.

III. VOCABULARY

1. Basic Reading Skills for Junior High School Use. Chicago: Scott, Foresman, 1957.
2. Crabb, George, Crabb's English Synonyms. New York: Grosset and Dunlap, 1938.
3. Funk, Wilfred and Lewis, Norman, 30 Days to a More Powerful Vocabulary. New York: Pocket Books, Inc., 1954.
4. Gilmartin, John G., Word Study. New York: Prentice Hall, 1941.
5. Guiler, W. S. and Coleman, J. H., Reading for Meaning. Chicago: J. B. Lippincott, 1955. Books 6 - 12 were used.
6. Hovious, Carol, Following Printed Trails. Boston: D. C. Heath Co., 1936.
7. Millar, Ward S., Word Wealth Junior. New York: Henry Holt and Co., 1950.
8. Nicholson, Margaret, The Dictionary of American-English Language Usage. New York: The American Library of World Literature, 1958.
9. Reader's Digest, Reader's Digest Association, Pleasantville, New York. Four issues were used.
10. Roget's Pocket Thesaurus. New York: Pocket Books, Inc., 1959.
11. Ryan, Nellie, Your Reading Guide. Wilkes-Barre, Penn.: Lyons and Carnahan, 1956. Books I and II were used.
12. Thorndike Barnhart Handy Dictionary. New York: Doubleday and Company, Inc., 1955.
13. Thorndike, Edward L. and Lorge, Irving, The Teacher's Handbook of 30,000 Words. New York: Bureau of Publications, Teacher's College, Columbia University, 1952.

14. Webster's Comprehensive Encyclopedic Dictionary. Chicago: Columbia Educational Books, 1943.
15. Webster's Dictionary of Synonyms. Springfield, Massachusetts: G. and C. Merriam Co., 1951.
16. Webster Handy College Dictionary. New York: The Americana Library of World Literature, Inc., 1958.

IV. MAPS, CHARTS, AND GRAPHS

Materials used for information:

1. Morgan, J. M. and Rauch, E. M., Graphic Geography Series. United States of America. Brooklyn, New York: Adams Book Company, 1958.
2. Parker, Edith Putnam, Seeing Our World Through Maps. Chicago Heights: Weber Costello Company, 1942.
3. Ryan, Nellie F., Your Reading Guide., Chicago: Lyons and Carnahan, 1945. Books 1, 2, and 3 were used.
4. Scharf, William L., Everyday Handbook - Math for Everyday Use. New York: Barnes and Noble, 1942.

Periodicals and newspapers used for teaching materials:

1. Boston Globe. 135 William T. Morrissey Boulevard, Boston, Massachusetts.
2. Boston Traveler. 300 Harrison Avenue, Boston, Massachusetts.
3. Christian Science Monitor. Christian Science Publishing Society, 1 Norway Street, Boston, Massachusetts.
4. Educational Research Journal. Dembar Publishers Incorporated, Madison 3, Wisconsin. (1958 - 1959)
5. Ladies' Home Journal. Curtis Publishing Company, Independence Square, Philadelphia 5, Pennsylvania.
6. Life Magazine. Time Incorporated, 540 N. Michigan Avenue, Chicago 11, Illinois.
7. Look Magazine. Cowels Magazines Incorporated, Look Building, Des Moines 4, Iowa.
8. "M.D." - Medical News Magazine. "M.D." Publications Incorporated, 30 East 60th Street, New York 22, New York.

9. Medical Economics Incorporated. Oradell, New Jersey.
10. Modern Medicine. 84 South 10th Street, Minneapolis 3, Minnesota.
11. National Geographic Magazine. National Geographic Society, Washington 6, D.C.
12. Newsweek Magazine. 444 Madison Avenue, New York 22, New York.
13. New York Times. New York Times Company, Times Square, New York 36, New York.
14. Saturday Evening Post. Curtis Publishing Company, Independence Square, Philadelphia 5, Pennsylvania.
15. Time Magazine. Time Incorporated, 540 N. Michigan Avenue, Chicago 11, Illinois.
16. Wall Street Journal. Dow, Jones & Company, Incorporated, 200 Burnett Street, Chicopee Falls, Massachusetts.

The students were above average with respect to intelligence and educational achievement. Students, teachers, and administration were receptive and cooperative toward the program.

Various materials were used to motivate the pupils, including a public address system, the Mahal Facer, and materials which were color coded for different levels. The students were assigned to the various levels and skills on the basis of their test results but were left free to work at their own progress rates and within limits, to choose among materials.

V. SUMMARY

The purpose of this study was to determine if reading skills can be taught to a large number of high school students in a single group and still provide for individual differences in intelligence, level of reading ability, speed of reading, and progress rates.

The study is justified because there are widespread individual differences; the high school population is fast increasing; there are too few high school teachers; and only inadequate reading programs.

Research shows that many students need help in reading and that various factors influence their growth in reading. These factors include sex, intelligence, environment, maturity, attitudes, adjustment, study habits, and physical, emotional and mental health. To meet the individual needs of the students, various types of individualized reading programs have been set up but few structured individualized, systematic reading programs are in existence.

The study provided practice in a variety of specific skills, according to need, for a large number of high school students in a single group. These skills included; 1. vocabulary development; 2. speed of reading; 3. organizational skills; 4. understanding graphic representations (maps, charts, and graphs); 5. following directions; and 6. critical thinking. Over a seven-week period an inexperienced teacher, with no previous teaching experience, taught the group for one hour three times a week.

CHAPTER II

DEVELOPMENT OF SPEEDED SKILLS

I. PROBLEM OF THE DEVELOPMENT OF SPEEDED SKILLS

Introduction. In chapter I an overview of the problem of providing mass differentiated skills teaching was discussed. This chapter will concern itself only with the study of the development of speeded skills in the program. The specific problem dealt with in this chapter is: Can a program be provided for a large group, administered by one teacher, that will allow each participant, working on his own level of achievement, to increase reading speed without impairing his comprehension?

Justification. In justification of training in speed reading the Manual of Operation for the Science Research Associates Accelerator states:

Few adults read as rapidly as their mental capacity permits. The average adult reads material of ordinary difficulty at a speed of about 250 words per minute. With suitable training most of them easily could learn to read at more than double this rate.¹

If this be true for adults it follows that young people of secondary school age also read below their maximum speed level and with training, could improve.

Concerning reading skills in general, Dilley states:

Reading is a continually evolving skill begun in the elementary school and continued through high school and college on into maturity...reading skills must keep pace with growing intellect and changing interests and a continual refinement of those skills

¹ Elizabeth A. Simpson, Manual of Operation for S.R.A. Reading Accelerator (Chicago: Science Research Associates, 1951), p. 6.

would in turn help the pupil to achieve his maximum intellectual growth.²

Concerning the range of reading rates, Gates says that: "Very proficient readers have a wide range of speeds from maximum to a thorough analysis of more difficult materials."³

The two preceding statements show us that training in reading skills is necessary throughout the school career. To be proficient readers, and thereby achieve maximum intellectual growth, the pupil must learn to adjust his reading rate to the material and purpose of the moment. Without training in speed this adjustment is not possible.

Best says that: "Most pupils read a level of effectiveness below their potential abilities."⁴

From the opinions of the authorities, it can be concluded that training in speed reading is a justifiable part of a reading program.

Scope. In this experimental study the emphasis was entirely on development of speed with a minimum comprehension of 80 percent. A mechanical timer was used to inform the students each minute of where they should be in their reading, but no mechanical pacing devices were used to force the pupils into faster reading rates. In other words, flexibility of the reading rate was left to the judgment of the pupil.

²Lois Dilley, "Every Teacher a Teacher of Reading," The School Review, 52 (December, 1944), 527.

³Arthur I. Gates, The Improvement of Reading, (New York: Macmillan Company, 1947), p. 445.

⁴Charles E. Best, "An Experiment in Reading Improvement," National Association of Secondary School Principals, 36 (January, 1952), 90.

Readers' Digest articles provided the materials for the paced reading. The level of difficulty was, therefore, controlled by the Digest, the average difficulty being of eighth to ninth grade level.⁵

Flexibility of reading rate was considered to be a part of this program, since Goffi found that the paced reading method was the only one of three which increased speed on all tests using different types of materials.⁶

II. REVIEW OF RESEARCH

There are very few studies of groups of secondary school pupils in which individual differences within the group have been taken into account and also in which no mechanical devices have been used. Included in the following review of research there are some references in which mechanical devices were used and some in which the people were older than secondary school age that are applicable to this study because they throw light on the problem of speed improvement.

In a large group it is necessary that the pupils do not need constant supervision or guidance in the use of materials. As Cole states:

It is essential for individual work that all exercises be self administered and self scoring...Moreover, by this technique the children learn to manage themselves. This develops self-control, self-direction, and selfcriticism. Such an arrangement puts an end to the prolonged immaturity which is the chief cause of poor reading for many children.

⁵ Rudolph Flesch, How to Test Readability (New York: Harper Brothers, 1951), pp. 4, 34.

⁶ Joseph Goffi, "A Comparison of Three Methods of Building Reading Speed with College Freshmen" (unpublished Doctor's Disertation, Boston University School of Education, Boston, 1960).

⁷ Luella Cole, The Improvement of Reading (New York: Farrar and Rinehart, 1938), pp. 332-333.

As an incentive device, a pupil must be constantly informed of his accomplishments, This is especially true in a large group project. In illustration of this point Harris says:

Help children to acquire a constructive attitude toward reading, through charts and similar devices. Let him see his progress in relation to his past achievements.⁸

In 1952 two nine-week experimental programs in speed of reading were conducted in McKinley High School in Washington D.C.⁹ A group of fifty volunteers was split in half. One group participated in the first nine weeks and the other half in the second nine weeks. During the experiment each group was split in half. One part of the group worked with the tachistoscope and the other part with the S.R.A. Accelerator. Weekly tests were given from the S.R.A. materials. All participants were pre-tested and post-tested on speed, comprehension, and vocabulary with the Survey Section of the Diagnostic Reading Test. The results of the experiment showed that all but two gained in speed during the program. These two, however, were reported to have gained subsequently. Fifty per cent continued to gain in reading rate after the close of the experiment. One lost his gains and dropped to a lower rate than he had before the experiment began. Out of the fifty participants, one made no improvement in speed. The other forty-nine showed some degree of permanent improvement in their speed of reading.

⁸Elizabeth H. Harris, "Helping the Slower Readers," Journal of the National Education Association, 33 (November, 1944), 187.

⁹Best, op. cit., pp. 89-96.

Thompson¹⁰ reports on a book versus machine experiment with adults that was held at the Air University of Maxwell Air Force Base, in Alabama. The experiment was of seven weeks duration and repeated three times with a total group of 438 men participating. In each experiment there was a group working with machines, another on a book reading program, and a control group was used. During the seven weeks there were twenty-one classes of fifty minute duration. The machine group used an opaque drop-shutter pacing machine and the book group centered entirely on How to Read Better and Faster. The pre-and post-test used was the Harvard University Reading Course Test. The results of this experiment showed the book to be over fifty words per minute faster than the machine group. The loss in comprehension for both groups was not significant. The author offered the possibility that a machine centered course might need a longer time to produce the same results as the book centered course because it takes time to become accustomed to the machine and time to wean away from it. The results do give encouragement, however, to groups which have no mechanical aids that they can use.

A group of eighty-four college students also participated in a book versus machine experiment to determine which method was best for gains in speed of comprehension.¹² The experiment was conducted for eight weeks and gave three semester hour credits. The machine centered group used

¹⁰ Warren Craig Thompson, "A Book Versus Machine Experiment in Adult Reading Improvement," College English, 15 (May, 1954), 470-473.

¹¹ Norman Lewis, How to Read Better and Faster (New York: Thomas Y. Crowell Company, 1958).

¹² Edwin H. and Marie P. Smith, "Speed Reading in the Machine Age," College English, 20 (February, 1959) 242-244.

the Percepto-Scope and accompanying manual.¹³ The book centered group used Improving Reading Abilities,¹⁴ Standard Test Lessons in Reading, Book E,¹⁵ as well as some text book material. At the beginning of the experiment, the machine centered group was in the forty-first percentile in vocabulary, and the book centered group in the thirtieth percentile on the Cooperative Reading Test C2. There was no significant difference between these norms for the two groups. At the close of the experiment, neither group had made a significant gain in vocabulary. The machine centered group had a nine percent drop in comprehension while the book centered group went from the fortieth to the forty-fourth percentile in comprehension. Each group gained twenty-five centile ranks in speed. As a conclusion the author states:

From the results of the experiment, it would appear that the Percepto-Scope is not needed by the trained teacher. Since the instructors followed the Percepto-Scope Syllabus, however, it would appear that the untrained teacher who faithfully followed the manual¹⁶ could accomplish as much as a trained teacher in terms of speed.

An experiment in which no mechanical devices were used was conducted with twenty men from Lynchburg Foundry, Radford, Virginia.¹⁷ The program

¹³ Percepto-Scope manufactured by Perceptual Developments Laboratories, St. Louis, Mo.

¹⁴ J. B. Stroud & R. B. Ammons, Improving Reading Ability (New York, Appleton-Century-Crofts, 1949).

¹⁵ William A. McCall & Selah Mae Crabb, Standard Test Lessons in Reading (New York, Columbia University Teachers College, 1950).

¹⁶ Smith and Smith, op. cit., p. 534.

¹⁷ Irene Cardwell, "Adult Reading Improvement without Machines," School and Society, 82 (September 3, 1955), 71-72.

consisted of lectures, discussions, practice, and tests. There were twelve meetings, each of two hours in length. The first and last meetings were test periods. The lectures and discussions were devoted to such topics as: Developing the Ability to Concentrate, Eye Span, Outlining, Skimming; and Hints for Breaking Bad Habits (regression, lip reading). The practice consisted of mimeographed work sheets selected on the basis of an interest inventory given at the beginning of the course. The average speed in words per minute at the beginning of the experiment was 297 with a range from 200 to 750. The average comprehension was 70 percent with a range from 30 to 90. At the end of the experiment the average speed was 417 words per minute and the average comprehension was 88.75 per cent. Only one man did not gain in speed, but he started at 750 words per minute. Two men showed a 10 per cent drop in comprehension. The author says:

Any success is attributable to the fact that the material was interesting and the participants had a constant awareness of progress. In subjects of greatest interest, greatest gains were made. The more interests a participant had, the greater his total gains.¹⁸

This concluding statement has strong implications for those who conduct reading programs. The material must have a wide interest range and the participants must be aware of their progress.

¹⁸Cardwell, op. cit., p. 72.

The University of Minnesota conducts reading classes yearly using a pacing technique.¹⁹ In 1950 an experimental program was carried on in which five methods of pacing reading were used. They were: (1) Harvard Films and Readings, (2) Tachistopic training, (3) Timed readings on a variety of materials, (4) Paced readings on a variety of materials, and (5) Master-Word-Vocabulary approach supplemented by a pocket sized lexicon. Students ranked each method as to its effectiveness. In general, the paced reading was acclaimed more successful than the others. The pacing technique works equally well with a large group or an individual. The entire test, Efficient Reading,²⁰ has been paced and sheets with the pacing times have been mimeographed. Each student is given a sheet at the start of the course and works at his own speed level. The teacher uses a stop or second hand watch. At the proper times he says, "next". The student adjusts his reading rate and tries to be at the proper place for each "next". This pacing technique has striking similarity to the one used in this study.

McCart²¹ reports a study that evaluated a two year reading program in Scarsdale, Long Island, New York. The methods used were similar to the ones used in this study.

¹⁹James I. Brown, "A Pacing Technique for Classroom Teaching of Reading," College English, 18 (December, 1956), 164-165.

²⁰James Brown, Efficient Reading (Boston: D. C. Heath Company, 1952).

²¹William Francis McCart, "An Evaluation of the First Two Years of a Secondary School Reading Program" (unpublished Master's Thesis, Boston University School of Education, Boston, 1958).

Among the materials used were: (1) Better Reading, Books 2 and 3,²²
 (2) Efficient Reading,²³ and (3) Standard Test Lessons in Reading.²⁴

Light fiction and easy non-fiction were provided for the pupils to take home and read, using an alarm clock to time their reading. In class sessions, tachistoscopes and shadowscopes were used. All material, except that for home use, had tables for converting time to rate or had a specified time in which to complete the exercise. All reading was followed by a test of ten or more questions and all exercises with the exception of Standard Test Lessons in Reading²⁵ had their own answer sheets. Having materials in this independent form permitted the students to read at varying levels of difficulty and at a wider range of reading rates. The greatest gains for the whole program were in the area of speed. For the first semester of 1955-56 the mean percentile gain was 10.50 and for the second semester, 12.30. For the first semester of 1956-57 the mean gain in the percentile score was 26.25 and for the second semester was 6.75. The number of students participating in each semester were 44, 71, 116, and 113, respectively.

Loring²⁶ conducted an experiment with 200 participants evenly divided between non-mechanical pacing technique and free reading. His results showed no significant difference between the means of the two groups.

22

Elizabeth A. Simpson, Better Reading (Chicago: Science Research Associates, 1950).

23

Brown, loc. cit.

24

McCall & Crabbe, loc. cit.

25

Ibid.

26

Robert Loring, "Marked Book Pacing Technique (non-mechanical) Versus Free Reading" (unpublished Master's Thesis, Boston University School of Education, Boston, 1960).

The group who used the pacing had a mean of 29.66 while the free reading group had a mean of 28.62. However, his groups were given only three one hour sessions of speed practice and Loring concluded that the limited time factor made any conclusions only tentative and that more experimental study was needed.

In a recent study, Goffi²⁷ compared three methods of building speed in reading. Approximately 300 freshmen at the University of Vermont participated in the experiment. They were evenly divided among four groups: (1) Free Reading, (2) Controlled Reading(machine), (3) Marked Book Pacing, and (4) Control Group. The experiment lasted for eight weeks. The three experimental groups met for thirty minutes twice a week. The control group followed the regular college course. The three experimental groups used identical materials. The marked book pacing technique was the only method which produced significant results on all the final tests. Not only did the rate of reading of this group improve but ability to adjust the rate of reading to the material also improved.

III. MATERIALS AND METHODS USED IN DEVELOPMENT OF SPEEDED SKILLS

Material. The materials used in the speed portion of reading program were the Readers' Digest issues of June 1953, March 1959, April 1959, and November 1959. An automatic timing device, the Mahal Pacer,²⁸ was used with these materials and in pacing other reading exercises on which the student wished to develop better working speeds. This timer could be set for any desired time interval. As each unit of time expired, a bell would ring and the students would know that they should

²⁷ Goffi, loc. cit.

²⁸ The Mahal Pacer, manufactured by Oaktron Industries, Monroe, Wisconsin.

have reached the next mark in their reading.

Some problems arose because of variations on the copies of the Reader's Digests which were available. The June 1953 issue was the Teacher's Edition. In the issue the comprehension tests were given in the center of the book with the answers on a separate page. The Teacher's Edition of the March and April issues were ordered. When they arrived, it was found that the style of the test section had been changed and the answers accompanied the questions. This necessitated the mimeographing of the tests. The November issue was the Student Edition and answer sheets had to be mimeographed if they were to be readily available to individual students.

Method. The four issues of the Reader's Digest were marked for paced reading at rates from 100 to 1,000 words per minute, according to the schedule used by Goffi²⁹. Four or five articles were measured for marking and listed on a Paced Reading Guide chart under each work-per-minute group, with the exception of some work-per-minute groups above 750 words per minute which had only three articles listed. Each work-per-minute group had one article with a test.

To mark a Digest article for a desired speed, each column was measured the required number of inches, as shown in Table II, and at that point in the column a line was drawn in red pencil. To maintain the speed for which the article was marked, the reader must reach a mark every minute.

²⁹ Goffi, loc. cit.

TABLE II
INCHES EQUIVALENT TO WORDS PER MINUTE
IN THE READERS' DIGEST

| Words Per Minute | Inches | Words Per Minute | Inches |
|---------------------|--------|---------------------|--------|
| 100 | 2 1/2 | 550 | 13 3/4 |
| 125 | 3 1/8 | 575 | 14 3/8 |
| 150 | 3 3/4 | 600 | 15 |
| 175 | 4 3/8 | 625 | 15 5/8 |
| 200 | 5 | 650 | 16 1/4 |
| 225 | 5 5/8 | 675 | 16 7/8 |
| 250 | 6 1/4 | 700 | 17 1/2 |
| 275 | 6 7/8 | 725 | 18 1/8 |
| 300 | 7 1/2 | 750 | 18 3/4 |
| 325 | 8 1/8 | 775 | 19 3/8 |
| 350 | 8 3/4 | 800 | 20 |
| 375 | 9 3/8 | 825 | 20 5/8 |
| 400 | 10 | 850 | 21 1/4 |
| 425 | 10 5/8 | 875 | 21 7/8 |
| 450 | 11 1/4 | 900 | 22 1/2 |
| 475 | 11 7/8 | 925 | 23 1/8 |
| 500 | 12 1/2 | 950 | 23 3/4 |
| 525 | 13 1/8 | 975 | 24 3/8 |
| | | 1000 | 25 |

The students found their reading rates during the first meeting of the reading program by a timed reading of a Readers' Digest article. This timing was done as a group and the number of words per minute indicated on the board at fifteen second intervals. The word-per-minute score was then rounded to the nearest 25 unit. During subsequent meetings, students were free to do as much or as little paced reading as they desired. The automatic timer was set during some portion of the class period to ring at one-minute intervals. Each student wishing to work on speed, read at his own rate of speed. At every ring of the

timer he tried to overtake the next red mark in that article. When he could successfully keep the pace and then pass the test for that group with a score of 80 per cent or better, he could proceed to the next words-per-minute group of marked articles. At the end of the paced reading period the student recorded his speed and comprehension score for that day on his progress chart.

Each student had a folder containing, among other things, a chart on which to record his daily progress, and a Paced Reading Guide. See Appendix A. The latter was a chart from which the students could find which Readers' Digest articles to read under each work-per-minute group of marked articles and where to find the tests and answer keys.

IV. FINDINGS AND CONCLUSIONS

Analysis of the data. The use of an automatic timer with a paced reading program of the type herein described is an improvement over the method of having the teacher act as time keeper since it frees the teacher to do other work. It eliminates the necessity of having the whole group work on paced reading at the same time, and enables the student to set his own time limits.

Of the 114 students who participated in the program, 99 worked on their speed of reading. This figure is 86.8 per cent of the total group. However, of these 99, only 70 kept adequate records of their progress in speed. The statistical results will therefore be confined to these 70 cases.

The range of reading rates at the start of the program was from 100 to 400 words per minute with a mean of 226.90. At the conclusion

of the program, the range was from 150 to 560 words per minute with a mean of 330.10, a mean gain of 103.20 words per minute. The critical ratio of 7.97 gives a significant difference between the means at the .01 per cent level of significance. In other words, this was a real gain and could not be attributed to chance factors.

TABLE III

COMPARATIVE DATA ON THE READING RATES OF THE TOTAL GROUP

| Number | Mean Words per Minute | O | SEM | SED | Diff. | CR |
|--------|--------------------------|--------|-------|-------|-------|-------------|
| Start | 70 | 226.90 | 61.20 | 7.34 | | |
| Finish | 70 | 330.10 | 89.20 | 10.66 | 12.94 | 103.20 7.97 |

Of the 70 students, 18 started in the 100 to 199 words-per-minute group; 44 started in the 200 to 299 words-per-minute group; 5 started in the 300 to 399 words-per-minute group; and 3 started in the 400 to 499 words-per-minute group. At the finish of the program, 2 were in the 100 to 199 words-per-minute group; 26 were in the 200 to 299 words-per-minute group; 27 were in the 300 to 399 words-per-minute group; 12 were in the 400 to 499 words-per-minute group; and 3 were in the 500 to 599 words-per-minute group.

The students who started in the 100 to 199 words-per-minute group, ranged from 100 to 190 words-per-minute. At the finish of the program the same group ranged from 150 to 375 words per minute. There was a significant difference between the before and after means at the .01 per cent level of significance.

TABLE IV

COMPARATIVE DATA ON THE 100 TO 199 WORDS-PER-MINUTE GROUP

| Number | Mean Words Per Minute | O | SEM | SED | Diff. | CR |
|-----------|--------------------------|-------|-------|-------|-------|------|
| Start 70 | 160.10 | 23.90 | 5.80 | 15.23 | 87.85 | 5.79 |
| Finish 70 | 247.95 | 58.05 | 14.08 | | | |

The students who started in the 200 to 299 words-per-minute group ranged from 200 to 295 words per minute. At the finish of the program they ranged from 225 to 560 words per minute. This group also had a significant difference between the before and after means at the .01 per cent level of significance.

TABLE V

COMPARATIVE DATA ON THE 300 TO 399 WORDS-PER-MINUTE GROUP

| Number | Mean Words Per Minute | O | SEM | SED | Diff. | CR |
|-----------|--------------------------|-------|-------|-------|--------|------|
| Start 70 | 234.00 | 30.20 | 4.55 | 12.83 | 109.70 | 8.55 |
| Finish 70 | 343.70 | 79.60 | 12.00 | | | |

The students who started in the 300 to 399 words-per-minute group ranged from 300 to 350 words per minute. At the finish of the program they ranged from 325 to 525 words per minute. There was no significant difference between the before and after means for this group.

TABLE VI

COMPARATIVE DATA ON THE 300 TO 399 WORDS-PER-MINUTE GROUP

| Number | Mean Words Per Minute | O | SEM | SED | Diff. | CR |
|--------|--------------------------|--------|-------|-------|-------|------------|
| Start | 70 | 310.50 | 12.00 | 5.36 | 32.11 | 75.00 2.03 |
| Finish | 70 | 385.50 | 70.80 | 31.66 | | |

The students who started in the 400 to 499 words-per-minute group all started at 400 words per minute. At the finish of the program they ranged from 425 to 500 words per minute. There was no significant difference between the before and after means of the group.

TABLE VII

COMPARATIVE DATA ON THE 400 to 499 WORDS-PER-MINUTE GROUP

| Number | Mean Words Per Minute | O | SEM | SED | Diff. | CR |
|--------|--------------------------|--------|-------|-------|-------|------------|
| Start | 70 | 400.00 | 0 | 0 | 26.73 | 41.95 1.57 |
| Finish | 70 | 441.95 | 46.35 | 26.73 | | |

The two lower word-per-minute groups made significant gains in their rate of reading while the higher groups made only slight gains. The lack of gain among the higher groups can be attributed to the lack of complete records for these groups. Of the total of 70 complete records there were 62 in the two lower speed groups and only 8 in the two higher speed groups. With a larger number of records for these higher word-per-minute groups the statistical results would probably prove more significant.

Recommendations for Future Study. It is felt that paced reading portions of future self-directive reading programs of the type described in Chapter I of this thesis should remain self-directive but with stricter controls.

It might be well to require a minimum amount of time at each meeting to be spent working on speed of reading. With this control, greater gains in speed could be made.

Another control should be that of setting aside time at each meeting for the recording of the day's scores on the charts. With this control, the students could not put off filling in their progress charts and more satisfactory statistical results could be compiled at the completion of the program.

The final recommendation is that of having more reading materials marked at the 200 to 400 word-per-minute levels.

With these controls and additions, a more effective self-directive speed reading program would be obtainable.

V. SUMMARY

Chapter II dealt with the paced reading portion of a reading program that provided for individual levels of achievement and rates of learning. The program was directed by one teacher and had a group of 114 participants, 99 of whom worked on speeded reading. The aim of the speed portion of the program was to provide materials that would allow each participant, working at his own level of achievement. and at his own convenience, to increase his reading speed without impairing his comprehension.

Four issues of the Readers' Digest, marked for reading rates from 100 to 1,000 words per minute, provided the materials.

At the first meeting students tested their reading rates. During subsequent meetings, an automatic timer was set to ring at one minute intervals to inform the student of his success in maintaining overtaking red markings in the Digests. When a student could keep pace and then pass a test on an article of that speed level with a score of 80 percent or better, he proceeded to the next higher speed level. Each student kept his own chart of progress.

An analysis of the data shows a significant difference between the before and after means of the words per minute rate. The mean for the group at the start of the program was 226.90 and at the conclusion was 330.10, a mean gain of 103.20 words per minute.

It is recommended that future programs, of the type herein described, require a minimum amount of time to be spent at each meeting on development of speed and that a time be set aside at each meeting for the recording of scores for the day.

CHAPTER III

ORGANIZATION AND STUDY SKILLS

I. INTRODUCTION

Fundamental to the whole, highly-complex process of reading and thinking is the ability to do organized thinking. Without this power, there cannot be accurate understanding and interpretation of written materials. With expository-type reading increasing in size and complexity in the upper grades and high school, it is most essential that pupils understand assigned reading. This requires the ability to grasp the author's message and see the relationship of what has been said. Command over larger and more difficult groups of ideas and thoughts is very important for academic success throughout high school and college. Today's Sputnik or space age calls for top mathematicians and scientists; therefore, it is more important than ever to acquire skills in organization of ideas in reading and thinking. Ability to understand and see organization in what one attempts to read is essential in most daily activities and for nearly all types of citizens. Since much study type reading is logically organized and different from the stories on which children learn to read, pupils do not stumble upon this power. They have to be trained in organization and study skills that develop good comprehension, correct concepts, and sound thinking.

Purpose. The purpose of this portion of the experiment was to prepare a variety of graded exercises designed to help high school students grow in the ability to see the organization of ideas and to try these

exercises out in mass adaptation to individual needs of students. A comparison was made on the before and after test scores of two groups, consisting of the experimental group using the practice materials for a seven week period and a control group. By comparison of the results of the before and after test data, it was possible to determine whether such organization materials used by the large experimental group significantly improved basic organization abilities for these high school students.

Justification of the problem. Many reading specialists stress the importance of an vital need for developing skills in organizing ideas in reading and thinking. Strang, McCullough and Traxler¹ state that beyond the intermediate grades, students are generally confronted with subject matter areas and increased demands for wide reading. This requires the ability to comprehend assigned reading, as well as the skill in seeing relationship in what has been read. Harris² also feels that organization is needed for mastery of the content subjects at the secondary level. As soon as pupils start to use textbooks, reading deficiencies become a general handicap. In the upper grades the content subjects are seriously affected by poor reading and vague understanding. The higher these pupils go, the more important the study of books becomes, and the more complex the reading abilities or skills become.

¹
Ruth Strang, McCullough and Traxler, Problems in the Improvement of Reading (New York: McGraw-Hill Book Company, 1955), p. 93.

²
Albert J. Harris. How To Increase Reading Ability (New York: Longmans, Green and Company, 1956), 3rd edition, pp. 6-7

Kelley and Greene³ emphasize this point when they state that a large number of junior and senior high and even college students are unable to read and study effectively. This deficiency causes failure in one or more subjects. According to Strang and Bracken⁴ in expressing this same idea, teachers in the subject areas complain that pupils can read stories but not study-type reading. There does not seem to be a carry over of basal reader skills to the textbook reading required in the upper grades.

Organization is also necessary for developing good comprehension and recall. Strang and Bracken⁵ state that organizing and relating facts gained from reading is an aid to understanding and remembering. Durrell⁶ seems to support this opinion when he claims that many of the practices and techniques that attend to the organization and relationship of ideas in the material studied will improve recall. In discussing organization and retention of ideas, Harris has this to say:

Material that is well organized in the reader's mind is easier to remember than material which is unorganized. The efficient reader tries to grasp the author's plan and to understand the relationships between ideas and the relations between the major ideas and the facts or details which give them definite meaning.⁷

³ Victor H. Kelley and Harry A. Greene: Better Reading and Study Habits (New York: Yonkers-on-Hudson, World Book Company, 1947), pp. 1-46.

⁴ Ruth Strang and Dorothy K. Bracken Making Better Readers. (Boston: D.C. Heath and Company, 1957), p. 42.

⁵ Strang and Bracken, op. cit., p. 221.

⁶ Donald D. Durrell, Improving Reading Instruction (New York: Yonkers-on-Hudson, World Book Company, 1956), p. 33.

⁷ Albert J. Harris. op. cit., p. 445.

It is the concensus that organizational skills are definitely needed to aid pupils in better understanding and fluency in their high school and college reading tasks. In meeting the demands of the school, organization of ideas is an aid in developing good comprehension, accurate recall, clear concepts, sound thinking, and logical reasoning.

In discussing the acute reading problems or difficulties recurrent among secondary students, Strang, McCullough and Traxler state that:

According to teachers, students are unable to read textbooks with comprehension, to interpret passages correctly and adequately, to note and remember important points and related details, and to understand a passage without rereading.

McKee seems to agree with this idea when he states that it is not uncommon to find that pupils apparently know nothing about organizing material they have read. This appears to be true, he feels, not only of elementary school children but of college students and secondary school pupils as well.⁹

McCullough firmly believes that students vary in their mastery of the different types of comprehension and profit by attention to those they are deficient in.¹⁰

8

Ruth Strang, McCullough and Traxler, op. cit., p. 8.

9

Paul McKee. The Teaching of Reading in the Elementary School (Boston: Houghton Mifflin Company, 1948), p. 488.

10

Constance M. McCullough, "What Does Research Reveal About Practices in Teaching Reading" English Journal 46: (November 1957), 475-90.

Durrell emphasizes this point in discussing skill in organization of ideas:

The ability to organize, to group by common factors, to subordinate within groups, and to show relationships of parts to whole, appears to be a distinct mental ability which responds to specific teaching.¹¹

In discussing comprehension, McCullough states, "There is considerable dissatisfaction (not confined to the U.S.) with the extent to which schools develop reading comprehension."¹² She adds that some investigations have shown that we have developed fact readers but not thoughtful readers.¹³

Regardless of whether reading for facts or reading for a variety of comprehensions is involved, reading requires thinking skills by the reader and organization of ideas.

Scope and limitation of the experiment. Many essential reading study skills are listed by reading authorities. However, this study provides for the most needed skills required in organizing ideas and getting the meaning such as: 1) reading to follow directions, 2) phrasing, 3) reading for main ideas, 4) reading to note details, 5) drawing inferences and conclusions, 6) outlining, 7) comprehending meaning of sentences, paragraphs, stories, and a whole selection, and 8) critical thinking.

No special provision was made for the following skills even though they are considered essential reading skills in the area of organization: 1) locating information in an encyclopedia, dictionary, testbook, and

¹¹ Donald D. Durrell, Op. cit., p. 302.

¹² Constance M. McCullough, Op. cit., pp. 477.

¹³ Ibid.

reference sources; 2) interpreting figurative language; 3) skimming for different purposes; and 4) reading to evaluate or detect propaganda.

Organizational skill in reading and thinking might be defined as the ability to see the relationship of ideas in a paragraph or whole selection through recognition of the central thought and the significant details that support the main idea. Getting the central thought or main idea of the author's message is the reading ability most frequently required of students and adults. The ability to distinguish between the main ideas and supporting details is almost as indispensable.

Certain steps or procedures are directly related to organizing ideas encountered in reading materials. Development of the ability to tell what happened first, second, and third is a beginning step in outlining and using logical sequence of ideas and coherent organization. Also, development of ability to select the main idea and important details is a natural step in preparation of recalling items in an orderly fashion, either orally or in writing. Learning to outline is definitely considered a very important phase of training in organization.

To assume that secondary students will acquire by chance this power of organization of ideas in reading and thinking is far from correct. They need training and a great deal of practice to develop such organization. First, it is important to learn what activities are involved in understanding what one attempts to read, and secondly, it is essential to have growth of the skills through specific practice in organizing ideas.

In summarizing, it is the concensus of authorities that the ability to organize material read should be taught. This study investigated the use of graded levels of reading material to meet individual needs and interests to see if under self-direction in a large group situation secondary students could acquire growth in organization and study skills.

II. REVIEW OF LITERATURE AND RELATED RESEARCH

In this portion of the chapter on organization, a brief review of literature related to certain skills requiring basic organization of ideas in reading and thinking will be given first, and the related research will be reviewed second. While major consideration is given to research at the secondary level, some experimental studies at the intermediate level are reviewed. It is felt that certain reading abilities required at the secondary level are similar to those developed in the middle grades, except for being on a higher and more complex level and having a wider range of skill experiences.

Review of literature related to organization skills. Specialists in the field of reading^{14/ 15/ 16/ 17/ 18/ 19} include almost similar basic reading abilities as being fundamental and essential to higher-level comprehension and thinking. These authors seem to agree that most students in high schools need specific instruction and adequate practice in basic reading skills.

¹⁴Durrell, op. cit., pp. 285-86.

¹⁵Harris, op. cit., pp. 433-453.

¹⁶Strang, McCullough and Traxler, Problems in the Improvement of Reading (New York: McGraw-Hill Book Company, 1955), 2nd edition, pp. 127-31; 138.

¹⁷Paul McKee, op. cit., pp. 486-493.

¹⁸Guy L. Bond and Eva Bond, Developmental Reading in High School (New York: The Macmillan Company, 1941), pp. 99-102.

¹⁹Ruth Strang and Dorothy Bracken, Making Better Readers (Boston: D. C. Heath and Company, 1957), p. 112.

Reading comprehension tests show the importance and need for particular silent reading skills related to this experiment. On these tests students are expected to: 1) size up the meaning of a paragraph or selection as a whole, 2) select topic or title that fits the paragraph, 3) see relationship among ideas presented: main ideas and supporting details, and 4) select details intelligently from paragraphs that are factual in type.

Strang and Bracken mention that in a study of 19,063 eighth graders who were given a reading test, it was found that twenty per cent were reading below the seventh-grade level. In this sampling there was a range of reading grade from third grade to college and also a wide range in proficiency in different reading skills:

In the more advanced skills of drawing conclusions, making inferences, applying reading, interpreting what is read, reading creatively, reading critically, and reacting to reading, the range for individuals as well as for groups is tremendous.²⁰

These authors point out that reading tests show not only the diversity of reading ability but also the kind of reading instruction students need to succeed in the reading tasks of their grade.

To summarize, although the components of organization as seen by different authors vary, basic organization in reading and thinking seems to involve adequate ability to: follow the organization of a selection, 2) identify the main idea, 3) see relationship among ideas, 4) recognize details that support the main idea, 5) make sound generalizations, 6) outline or summarize the ideas in material read, 7) follow directions,

²⁰Strang and Bracken, op. cit., pp. 60-61.

and 8) to think critically. Briefly, it involves the ability or power to find out exactly what any written matter says. Since one must think actively while reading and since the brain is instrumental in getting the meaning, then reading is a thinking process. Consequently, it appears that specific instruction and practice requiring organization and study skills are quite necessary for high school students, in order to develop accurate and complete understandings of what they attempt to read.

In discussing study skills necessary for completely grasping the organization and development of the ideas in reading matter, Durrell mentions that "ability to do careful, detailed reading has important values in both vocational and avocational activities."²¹

Experimental studies and research at the intermediate level. There are numerous experimental studies concerning students' abilities in reading organization and study skills that were conducted in the intermediate grades and that are pertinent to this section of the present experiment.

In an effort to determine the relative order of difficulty of several types of study skills in the middle grades, Keneally²² in 1939, conducted a study involving three hundred and thirty-six pupils. Her exercises on paragraph comprehension involved thorough reading. Among the results of her research, she found the order of difficulties secured for the six study skills measured in her study was: 1) finding minor ideas with

²¹Donald D. Durrell, Improvement of Basic Reading Abilities (New York: Yonkers-on-Hudson, World Book Co., 1940), p. 233.

²²Katherine B. Keneally, "The Relative Order of Difficulty of Several Types of Study Skills in the Intermediate Grades." (Master's Thesis, Boston University School of Education, Boston, 1939), pp. 1;37.

major ideas supplied, 2) selection of best summary, 3) retention of order of ideas, 4) matching headlines and paragraphs, 5) finding major ideas with minor ideas supplied, and 6) writing original headlines. The types of exercises listed first were the easiest and they increased in difficulty so the last three proved to be the hardest. Also her findings showed that the order of difficulty was the same for the group of children reading on an intermediate grade level and for those reading above intermediate grade level.

Hulsman²³ in 1947 compiled a workbook of exercises to develop organizational ability in grade six and to stimulate thought. Her study over a five weeks' period involved her workbook lessons, which contained fourteen types of work and progressed in difficulty. The findings on her small sampling showed that there was definite improvement in almost every kind of exercise. Among her conclusions she reported that specific drill can increase pupil skill in reading organization and that more than five weeks is needed to develop the varied skills in organization.

Also, Dyer²⁴ in 1949 carried on a study to develop reading organization in grade five and found definite improvement with a total class gain of 16.08 per cent in organizational ability.

²³Helen Louise Hulsman, "Exercises to Develop Reading Organization in Grade Six, (Unpublished Master's Thesis, Boston University School of Education, Boston, 1947) pp. 1; 27-45.

²⁴Helen F. Dyer, "Exercises to Develop Reading Organization in Grade Five" (Unpublished Master's Thesis, Boston University School of Education, Boston, 1949), pp. 2; 50-58.

In 1953, Hanley²⁵ evaluated the effectiveness of a program giving specific training in the skill of organization. Her experiment, involving one hundred and ninety-one pupils (108 in the experimental group and 83 in the control group), was conducted in seven fourth grade classes. The lessons which were self-explanatory in nature emphasized the distinction showed that the gains by the experimental group were superior to those of the control group, in that they almost doubled those of the control group.

The purpose of Johnson's study²⁶ in 1951 was to evaluate Hulsman's workbook of exercises. There were seven hundred and thirty-eight pupils from several sixth grades involved in this during a period of five weeks. The results showed gains for both the experimental group and control group and that the experimental group made the greatest gain, with a critical ratio of 3.39.

Sheldon and Hatch²⁷ in 1951 studied the reading skills of good and poor readers, by administering the Durrell test to sixty-two sixth grade pupils, who were of average or better than average intelligence. In their conclusions they report that the poor readers outnumbered the good readers in the number of areas of weakness. However, both showed weakness in the following skill that is important to successful reading and related

²⁵ Gertrude T. Hanley, "An Evaluation of the Effect of a Program of Specific Training in the Skill of Organization in Improving Comprehension in the Fourth Grade" (Unpublished Master's Thesis, Boston University School of Education, Boston, 1953), pp. 9; 16; 31-32.

²⁶ Joan Johnson, "Evaluation of Exercises to Develop Reading Organization in Grade Six" (Unpublished Master's Thesis, Boston University School of Education, Boston, 1951), pp. 1-2; 40-41.

²⁷ William D. Sheldon and Shirley Hatch, "Strengths and Weaknesses in Reading of A Group of Sixth Grade Children," Elementary English, Vo. 28 (February 1951), pp. 88-91.

to present investigation: 1) after oral reading, poorly organized recall and very scanty recall on hard material and 2) after silent reading, very scanty recall on hard material.

A study was reported in 1956 by Piekarz,²⁸ who compared the reactions of two pupils identified as a better reader and a poorer reader in terms of their ability to acquire accurate understanding from reading material. She concluded that the higher-level reader derived correct and good understandings from a reading selection. The poorer reader, who had difficulty distinguishing between literal meanings and implied ones, derived inaccurate and incomplete meanings.

In summarizing, it would appear that pupils in the middle grades need instruction and practice to develop the ability to see organization in written matter and the interrelationship of ideas.

Related Research at the Secondary Level. In an effort to learn more about the process involved in understanding what is read, investigators have used various research techniques. As early as 1917, Thorndike made an analysis of the mistakes of students in paragraph reading. In emphasizing the fact that the grasping of meaning involves a high type of thinking, he pointed out that:

...the mind is assailed as it were by every word in the paragraph. It must select, represent, soften, emphasize, correlate, and organize all under the influence of the right mental set or purpose or demand.²⁹

²⁸Josephine A. Piekarz, "Getting Meaning From Reading," Elementary School Journal, 56 (March 1956), pp. 303-309.

²⁹William S. Gray. Review of Reading. Encyclopedia of Educational Research. (The American Education Research Association) A department of the National Education Association, Edited by Harris. Third Edition, 1960, pp. 1100-1101.

The psychological principles of organization are, according to Salisbury,³⁰ fundamental to thought getting and thought giving. She carried on a study in 1935 to improve reading comprehension. Her experiment with four experimental groups in seventh, ninth, and twelfth grades of four experimental groups in seventh, ninth, and twelfth grades of four high schools, lasted six weeks and covered thirty training lessons using organization techniques such as outlining and summarizing. The results showed: 1) significant gains in reading comprehension among those who were trained in logical organization and 2) training given intensively for six weeks was somewhat superior to training given intermittently for one term.

Broening³¹ in 1941 surveyed 20,000 students in grades seven through twelve and analyzed a million and a half standardized tests. As a result, he reported the need for dynamic practice in the skills involved in the reading purposes of secondary school readers. The skills he included were: discovering the central idea, answering specific questions, skimming to get the gist of a selection, and outlining to remember what is read.

In 1942 Burkhardt³² conducted a doctoral study to determine which skills reading specialists thought were most important in reading ability of secondary school students. She found they rated the ability to organize data eleventh in rank order of the major abilities in a list of eighteen general reading abilities.

30

Racheal A. Salisbury, "Some Effects of Training in Outlining," English Journal 23 (February, 1935), 111-116.

³¹Angela Broening, "Abilities Which Contribute to Effective Reading," Education, 62: (September 1941), 11-17.

³²Kathryn Burkhardt, "An Analysis of Reading Abilities," Journal of Educational Research, 38: (February 1945), 430-439.

Brink,³³ in a national study in 1949, analyzed the study habits of one thousand high school students and found that the habits in the upper fourth of their class follow similar patterns. The following procedures characteristic of top-ranking students and related to the present experiment were the ability to summarize main points in own words instead of copying sentence or paragraphs, 2) read entire section to comprehend the main idea and then decided on major and minor topics of their outline, and 3) rely strongly on their own judgment and opinions in study situations.

Davis attempted in 1951 to identify the basic factors in comprehension, through factor analysis. He used nine skills considered important by reading authorities. Of the nine types of comprehension identified by him, those pertinent to this portion of the experiment were:

1. Reasoning in reading, including ability to infer meanings and to weave together several statements.
2. Ability to focus attention on a writer's explicit statements almost to the exclusion of their implications.
3. Ability to identify an author's intent, purpose, or point of view.
4. Ability to grasp the detailed statements in a passage.
5. Ability to follow the organization of a passage and to identify antecedents and referents to it.
6. Ability to select the main thought of a passage.³⁴

Relevant to studies of main ideas is one by Bliesmer³⁵ in 1954, in which he attempted to determine the extent to which children of equal mental age but markedly different in chronological age and I Q tend to be alike in regard to reading achievement. For his comparison, the dull

³³William G. Brink, "Study Habits," Phi Delta Kappan 32, p. 238,

³⁴Frederick Barton Davis, "Comprehension in Reading," Baltimore Bulletin of Education, 28: (January-February, 1951), 16-24.

³⁵Emery P. Bliesmer, "Reading Abilities of Bright and Dull Children of Comparable Mental Ages," Journal of Educational Psychology. 45: (1954), 321-331.

children with I Q score of 84 or below were selected from regular eighth- and ninth grade classes and some special education classes in two junior high schools, while the bright group was chosen from regular third- and fourth-grade classes in three elementary schools. The following specific abilities involved in reading comprehension and relevant to the present investigation were measured: 1) memory for factual details, 2) location or recognition of factual details, 3) perception of relationships among definitely stated ideas, 4) recognition of main ideas, and 5) drawing inferences and conclusions.

Among his conclusions that seemed warranted were that bright children are significantly superior to dull children of comparable ages with respect to: 1) total reading comprehension and specific abilities such as locating or recognizing factual details, recognizing main ideas, and drawing inferences and conclusions; and 2) the relatively more complex and intellectual comprehension abilities.³⁶ Thus, it was found that bright children are superior to dull children of same mental ages in recognition of main ideas.

In 1955 Bernstein³⁷ tested one hundred ninth-graders on two passages of comparable difficulty but poles apart in interest appeal. The more interesting selection resulted in more response, more speed, and greater comprehension.

³⁶

Ibid.

³⁷

Margery R. Bernstein, "Relation Between Interest and Reading Comprehension," Journal of Educational Research, 49: (December 1955), 283-88.

Forlono and Wrightstone³⁸ in 1956 measured the effectiveness of special reading instruction in vocational schools. After this instruction for one year, the experimental classes in vocational high schools exceeded control groups by one term in average reading achievement.

According to Tormey and Patterson,³⁹ two of the major areas of criticism of the American High Schools are poor reading and poor study skills. In their experimental program in Needham Senior High during 1957-58, they provided instruction in reading to students whose reading achievements were low. The Iowa Silent Reading Tests were administered in September 1957 and June 1958. Test results showed that high school students do improve significantly through instruction in reading. The average increase in all grades was about twenty-five to thirty percentile points as a result of this training. Two of the aims that they had for their reading program which are pertinent to this section of present experiment were: 1) to raise the level of comprehension and 2) to teach the student how-to-study.

A doctoral study in 1957 was conducted by Kinder⁴⁰ to investigate the type and frequency of reading difficulty in secondary school reading skills. The main purpose of his study was: 1) to find out the kind of

³⁸George Forlono and J. Wayne Wrightstone, "Measuring the Effectiveness of Special Reading Instruction in Selected Vocational High Schools," High Points, 38: (March 1956), 31-36.

³⁹Mary K. Tormey and Walter G. Patterson, "Developmental Reading and Student Evaluation," Journal of Developmental Reading, 2: (Winter, 1959), 30-43.

⁴⁰Robert F. Kinder, "Types and Frequency of Difficulties in Secondary School Reading Skills" (Thesis, Ed. D., Boston University School of Education, Boston, 1957), pp. 1; 95; 151.

reading errors made by eleventh graders whose scores on standardized reading tests lie at or below the 23rd percentile according to national norms and 2) to determine the frequency with which these errors occur. In this study one hundred and fifty-nine eleventh-grade students were tested, in five reading skills, one of which is related to present investigation--stating and recognition of main ideas. A revision of the Niles Analysis of Reading Difficulty Tests⁴¹ Grades 7-12, was used to determine their errors.

In the results of his study he reported several things, two of which are related to this portion of experiment:

1. Most frequent errors were made in stating and recognizing main ideas of paragraphs,..., and unaided oral and written recall of main ideas and details.
2. Specific errors found to be most frequent for the skill of main ideas were: confusion with details and too broad statements of main ideas and confusion of main ideas with too wordy statements.⁴²

Among his conclusions the following seem to be important and relevant to the present problem:

1. The group of unsuccessful readers in the eleventh grade who were tested made a high percentage of error of most of the types tested.
2. Total reading scores below the 23rd percentile on the Cooperative Reading Test failed to discriminate between students as to: the types of errors they were likely to make and the frequency with which they were likely to make these errors.⁴³

⁴¹Olive Niles, "The Construction and Validation of a Test of Certain Word Analysis Abilities for Junior-Senior High School Pupils" (Unpublished Ed. D. dissertation, Boston University, 1954).

⁴²Kinder, Op. cit., p. 112.

⁴³Kinder, Op. cit., p. 160

Another most recent study was conducted by Herber in 1959; it involved high school students in grades ten through twelve. This study investigated standardized measurements of students' reading ability, mental ability, and critical thinking ability.

It included a survey of tests designed to measure critical thinking and materials available to teach it. As to the importance of teaching critical thinking, Herber⁴⁴ mentions that authorities are concerned over the necessity of training citizens who can think critically.

To teach critical thinking to the experimental group, he constructed materials in the form of a sixty-seven-page workbook, which was printed by the multilith process. Exercises were given twice weekly in twenty to thirty minute sessions and corrected upon completion of each. Each student handles material according to his ability needs. Among his conclusions, he reported that the ability to think critically can be improved. He further stated that the study shows instruction in critical thinking does positively affect the strengthening of vocabulary and the improvement of reading comprehension.⁴⁵

In reviewing Halfter and Douglass' study which seemed to support this last finding Gray says:

The fact that many college students fail because of limited ability to read is...well known. After eight years of

⁴⁴Harold L. Herber, "An Inquiry Into Effect of Instruction in Critical Thinking Upon Students in Grades 10, 11, and 12." (Unpublished ED. D Thesis, Boston University School of Education, Boston, 1959), pp. 4-5; 51.

⁴⁵Herber, op. cit., pp. 67; 129-131.

detailed work with such students, the reading staff at DePaul University have concluded the chief difficulty is not in basic skills of recognition and comprehension but rather in the thinking skills involved in most reading activities. They estimated two-thirds of entering students have difficulty for this reason.⁴⁶

⁴⁶ William S. Gray. "Summary of Investigations Relating to Reading July 1, 1958 to June 30, 1959," Journal of Educational Research, 53: (February 1960), No. 6, p. 212.

III. PRACTICE MATERIALS IN ORGANIZATIONAL SKILLS

In the preparation of materials used in teaching organization in reading and thinking, it was necessary to decide on what are considered the important skills in reading organization and study. There are many essential reading abilities that students should gain at the secondary level, but it seemed impractical for the present experiment to include all the numerous skills needed for higher-level comprehension and thinking.

Major organization skills included in experiment. In this study materials were provided to build specific skills that have particular importance to reading ability and seeing organization of material read: 1) following directions, 2) selecting a title, 3) identifying main idea, 4) getting details or facts, 5) making generalizations or drawing conclusions, 6) making associations and organizing ideas, and 7) thinking critically.

Description of materials. Reading investigators have emphasized repeatedly that the training provided must be stimulating and interesting; therefore, in building the exercises, an attempt was made to provide materials that were. A wide range of materials was available to this experimental group to meet all levels of interests, needs and abilities. No student was expected to work on every type of skill. It was hoped that the brighter students would naturally become involved in the longer and more difficult activities, while the less able students would progress through the easier exercises with a fair degree of success.

Materials for this experiment were prepared and arranged by grade levels on colored oaktag with progression coded by color. The lessons or exercises were mounted on the front of the colored oaktag, while the check-up answer questions were attached to the back. Correct answers were in the form of answer keys easily accessible to the students who were expected to correct each exercise when finished before continuing on to another one. Immediate knowledge of results is very important to show the student whether he performed well, where his errors occur, and what needs were noticeable. By having self correcting exercises and charts to note progress, knowledge of results was implemented.

In developing specific organization and study skills, the use of published practice material, cut up and mounted on colored oaktag, eliminates errors of untried material and increases variety that is possible at small cost. This method of colored, graded oaktag allows an easy, quick, and inexpensive way of assigning materials.

Sources of practice materials. The graded materials used for cutting and mounting on oaktag were Reading for Meaning,⁴⁷ and Improving Reading Ability.⁴⁸ Exercises from Standard Test Lessons in Reading⁴⁹ were broken into phrasings and typed on oaktag, one exercise to a card, ten

⁴⁷William S. Guiler and J. H. Coleman, Reading for Meaning (Chicago: J. B. Lippincott, 1955) Revised.

⁴⁸James B. Stroud and Robert B. Ammons, Improving Reading Ability, Second Edition (New York: Appleton-Century-Crofts, Inc. 1956).

⁴⁹William A. McCall and Lelah Mae Crabbs, Standard Test Lesson in Reading (New York: Bureau of Publications, Teachers College, Columbia University, 1950).

exercises from each book. This provided phrase reading practice at a progressive sequence as to difficulty. Blank outlines were prepared for exercises in Study Type Reading Exercises⁵⁰ prepared to be used in organized recall of ideas. The student would read an exercise, close the book, and attempt to fill in the blank outline from memory in organized coherent statements. This material was chosen because it furnished brief, well-organized, logically arranged, abstract material with low vocabulary difficulty. Since it is easy to read, the student's mind can be concentrated on organizational skills with the exclusion of other distractions. Two available materials were used without any modification of form or content. They were the SRA Reading Laboratory - College Edition⁵¹ and Think?⁵²

⁵⁰ Ruth Strang, Study Type of Reading Exercises (New York: Bureau of Publications, Teachers College, Columbia University, 1956). Revised.

⁵¹ Don H. Parker, SRA Reading Laboratory - College Edition (Chicago: Science Research Associates, Inc., 1957).

⁵² Harold L. Herber, Think? A Work book Designed To Help You Think Critically (Hamilton, Mass., September 1958).

IV. FINDINGS

Among the tests which had been administered at the beginning of this experiment were three that have particular relevance to organization and study skills achievement. These tests were: Test 5, "Interpretation-Social Studies" of the Iowa Tests of Educational Development; Test 5, "Outlining" of the Spitzer Study Skills Test; and the Watson-Glaser Critical Thinking Test. Virtually all the students took the first two of these tests but only those interested in the critical thinking exercises, about fifty per cent of the students, took the Watson-Glaser Test. The achievement of the students at the beginning of this experiment is presented in Table VIII.

TABLE VIII
STUDENT ACHIEVEMENT ON INITIAL TEST RELATED TO
ORGANIZATION AND STUDY SKILLS

| Instrument | Means | O | National Norms | |
|---|-------|------|----------------|------------|
| | | | Grade | Percentile |
| Iowa Test of Educational Development, 5 Interpretation - Social Studies | 19.13 | 4.87 | 11 | 74 |
| | | | 12 | 65 |
| Spitzer Study Skills Test 5-Outlining | 29.2 | 8.46 | 11 | 60 |
| | | | 12 | 53 |
| Watson-Glaser Critical Thinking Test | 61.9 | 7.06 | H.S. | 77 |
| | | | 13 | 48 |

Whenever test scores are analyzed on a population two questions always arise: How are these students performing with respect to the

national norms? and are they performing as well as could be expected in line with scores on intelligence tests?

On all of the tests administered to these students, performance was above the national average. The lowest scores were made on the Spitzer Study Skills Tests in Outlining and in Reading Maps, Charts, and Fraphs. But even on these tests the mean achievement was slightly above the average on the national norms.

On the other hand, it is probable that these students were not performing as well as they should. The Otis Gamma Test had been used to measure intellectual potential. The Otis tests score relatively lower than most other instruments for appraisals of intelligence. The Manual of Directions⁵³ for the Gamma Test states, "Gamma I. Q's tend to be somewhat less variable than ordinary I. Q's..." The Eells study⁵⁴ found the Otis Tests consistently measured lower than did other tests of intelligence when used on 2,295 pupils.

According to this relatively conservative instrument, Otis Gamma Test, these students scored at the 84th percentile. This means that their average achievement should be at the 84th percentile to be consistent with their intellectual ability. On the Interpretation of Social Studies Test they were about fifteen percentile points below this level; on the Watson-Glaser Critical Thinking Test, seven percentiles below;

⁵³ Arthur S. Otis, Manual of Directions for Gamma Test (Yonkers-on-the-Hudson: World Book Company, 1954), p. 5.

⁵⁴ Kenneth Eells, Intelligence and Cultural Differences (Chicago, Illinois: University of Chicago Press, 1951), p. 146.

This means that the students were able to score on tests requiring thinking fairly near their intellectual level but were below expectancy in interpreting ideas read and markedly poorer in organization skills.

Some tests were given at the conclusion of this experiment. Data on these tests will be presented in Chapter VI together with an appraisal of any change in scores from those on the initial tests.

TABLE IX
FREQUENCY OF USE OF MATERIALS ON ORGANIZATION AND
CRITICAL THINKING SKILLS

| Material | Number Using the Material | Percent of Total Group |
|----------------------|------------------------------|---------------------------|
| Phrasing | 87 | 76.3 |
| Reading for Meaning | 86 | 75.4 |
| Following Directions | 50 | 43.9 |
| S.R.A. Laboratory | 44 | 38.6 |
| Critical Thinking | 17 | 14.9 |

V. SUMMARY

It was the intent of this part of the study to prepare and arrange self-administering sequential materials, designed to teach phrasing, reading to follow directions, organizational understandings, and critical thinking. These materials were to be of such a nature that they provided for mass skills instruction to meet individual differences in level of achievement, reading speed, skills needs, and progress rates.

These materials were then used by a group of 114 students according to their preferences and needs. The materials proved to be challenging and acceptable to the students and seemed to meet four kinds of individual differences within the framework of a large group instruction situation.

CHAPTER IV

DEVELOPMENT OF MEANING VOCABULARY

I. INTRODUCTION

Justification. Because of the growing school population, too few trained teachers, demands on time in the school day, and little provision for special reading programs, many secondary school pupils do not have sufficient help in solving their reading problems.

It seems necessary therefore that a developmental reading program should be instituted in the secondary schools with materials to develop skills which could be used independently and individually by large groups of pupils.

This chapter of the developmental reading program was concerned with the development of meaning vocabulary through independent, self-directed study in a mass situation which provided for individual differences in reading capacity, work speed, vocabulary level, and progress rates.

Delimitation. This study considers only three methods for encouraging growth in meaning vocabulary: synonym and antonym association, association through multi-meaning words, and meaning through context clues. Word analysis skills, dictionary meanings, analogies, etymology, and semantics have not been included.

Definitions. Context clues are words with which the strange word is associated in the reading matter which suggest or explain its meaning.

Antonyms are words of contrary meaning.

Synonyms are words of the same or nearly the same meaning.

II. RELATED RESEARCH

The development of meaning vocabulary is one of the most important objectives of reading instruction.

Various methods for the development of vocabulary meaning have been described in the literature. O'Sullivan's¹ summary included:

1. Work with the dictionary.
2. Structural analysis through word parts.
3. Analogies to understand relationships.
4. Study of etymology to see how meaning was derived.
5. Semantics for understanding of appropriate words selection.
6. The unit method or situation association of words.
7. Incidental learning through extensive reading.
8. Synonyms and antonyms.
9. The contextual method.

The necessity for skills in the development of meaning vocabulary to aid students in their reading comprehension has been recognized for many years by reading authorities.

In 1938, Gray and Holmes² emphasized the relation between vocabulary and reading comprehension in the following statement:

The increasing demands made upon the reader today are often accompanied by serious difficulties in reading and comprehension. This is due in part to the large number of unfamiliar words that occur in much of the reading matter now

¹Elizabeth O'Sullivan "A Summary of Research on Methods of Teaching Vocabulary in the Secondary Schools," (Unpublished Master's Thesis, Boston University School of Education, Boston, 1949), p. 28.

²William S. Gray and Eleanor Holmes, The Development of Meaning Vocabularies. Chicago, Illinois: University of Chicago Press, 1938), p. 3.

provided for school use. It is due also to the fact that children attach vague or inaccurate meanings to many of the words which they hear frequently or use orally.

Many years later Gray and Holmes³ conducted an experiment to determine the relative effectiveness of the direct versus the incidental method of promoting vocabulary growth. In the experimental group the teacher gave special help to the pupils in determining the meanings of words read, while the pupils in the control group received no help unless they asked for it. Progress reports showed that the experimental group made significantly greater growth in meaning vocabulary than did the control group.

The necessity for a vocabulary development program has been studied at all levels. At the elementary level⁴ prepared tests to determine the difficulty of content material based upon one-hundred words in six subject areas that were assumed to be difficult for fifth grade students. The percent of correct responses varied from an average of 38.6 in science to 67.6 in arithmetic. The evidence secured indicates that a program of word-enrichment in the subject areas is needed if children are to understand the textbooks used in the content subjects.

At the Junior High School level Jenkins⁵ attempted to determine the relative effectiveness of four months of vocabulary study.

³William S. Gray and Eleanor Holmes, "The Development of Meaning Vocabularies in Reading," Interpreting Language, An Essential of Understanding, Research Bulletin of the National Conference on Research in English, 1951, p. 19.

⁴Mary E. Johnson, "Vocabulary Difficulty of Content Subjects in Grade 5," Elementary English. Volume 29 (1952) pp 277-80.

⁵Margaret Jenkins, "Vocabulary Development: A Reading Experiment in 7th Grade English," Peabody Journal of Education, Volume 19, (May, 1942) pp. 347-361.

She divided the seventh grade class into groups; one control and four experimental. The Iowa Silent Reading Test was administered to all groups. Then for a period of fourteen weeks all groups were given the same reading material and guidance with the exception of vocabulary training. The control group received no vocabulary training; Group E₁ used a reading workbook; E₂ kept individual word cards with unknown words with contextual meaning and did dictionary drills; E₃ studied synonyms and antonyms, did dictionary work, and kept vocabulary notebooks; E₄ studied examples of words in context and structural word analysis. The second Iowa Silent Reading Test was administered and in eight months the improvement in reading comprehension was as follows: Control group 8 months; E₁ - 9 months; E₂ - 13 months; E₃ - 15 months; and E₄ - 10 months. Jenkins concluded that systematic study improved general vocabulary.

At the high school level Miles⁶ reported the results of a controlled experiment with fifty pupils in Grade 10 to explore the value of teaching vocabulary by the direct method. Results of the Inglis Vocabulary Test indicated a median gain of two years after one semester's intensive vocabulary study. A commendable feature of this experiment was that these students were followed up and tested again two and a half years later at the end of Grade 12, and their results compared with the control group. It was found that while the median for the experimental group had declined slightly, it was still higher than the median obtained by the control group which had no special training. Thus some evidence of long term value in the training was indicated.

⁶Isadora W. Miles, "An Experiment in Vocabulary Building in High School," School and Society, Volume 61 (April 28, 1945) pp. 285-286.

The importance of vocabulary in the scholastic success of college students was indicated by Templeton⁷ in a study of the vocabularies of the vocabularies of college freshmen. He demonstrated that students with good vocabularies had the best scholastic records in college. He concluded, "If at any time during his educational career, a person possesses or builds up a vocabulary greater than the vocabulary of his classmates, his grades in the immediate future will be higher than theirs."

Westfall⁸ seems to bear out the above statement in a study which he conducted to measure the effects of a six-quarter college course in vocabulary building. Stressing the acquisition of new words in connection with college courses and other areas pertaining to student's interests and needs, pre and post-testing after three month's training of three-hundred and thirty-six students revealed an average gain of four-thousand, nine-hundred and ninety-four words.

On the whole most well-controlled experiments seem to show that the experimental groups who have had direct training in meaning vocabulary, no matter what method of word study was used, showed greater progress than the control groups who had no particular training. It is indicated that direct vocabulary instruction is necessary at all levels.

⁷William Templeton, "Vocabulary and Success in College," School and Society, Volume 51 (Feb.1940) pp.221-224.

⁸Alfred Westfall, "Can College Students Expand Their Recognition Vocabularies?" School and Society, Volume 73 (Jan.1951), pp. 25-38.

III. MATERIALS

The materials for the meaning vocabulary section of this study were chosen and constructed so that students could work with word association and context skills in self-directed practice at their own speeds, and in accordance with their needs, interests, and rate of growth. An attempt was made to make these materials attractive, colorful and intriguing.

Three types of exercises were developed to encourage growth in meaning vocabulary; synonym and antonym association, association with multi-meaning words, and meaning through context.

Synonym and antonym exercises. As Reading for Meaning⁹ was the basic text used in Chapter III of this study for the organization and thinking skills, it was decided to correlate the vocabulary skills with these materials in order to gain additional exposure and practice on the words in meaningful situations.

Reading for Meaning Grades 6 to 12 was used for the selection of vocabulary words. Each booklet was divided into twenty-five units. Ten key words were chosen from each of the twenty-five units at each level. Where appropriate synonyms occurred in the material these were added. Other synonyms and antonyms were added. All words chosen which were not in the basic text were checked for grade levels with Lorge and Thorndike's

⁹W. S. Guiler and J. H. Coleman, Reading for Meaning 6 to 12. New York: J. B. Lippincott Company, 1955.

30,000 Word List.¹⁰ Antonyms and synonyms inappropriate for the grade level were excluded.

Key words were typed on yellow oaktag paper, synonyms on orange because of its relationship to yellow, and antonyms on blue because of its contrast.

The basic words from each Reading for Meaning exercise were typed in a triple-spaced list on small yellow cards. The orange (synonyms) and blue (antonyms) were cut separately into slips and confined with an elastic band.

Envelopes were prepared which had been striped with different colors of mystic tape according to the basic graded color scheme of the experiment with which the students were familiar. The envelopes had been number tagged according to the units to facilitate association in use by the students.

Each yellow key word card, containing ten words and the bundle of synonyms and antonyms were placed in an envelope numbered according to the units in the Reading for Meaning series. As there were six grade levels containing twenty-five units each, the number of units on which the pupils could practice totalled one-hundred and seventy-five. However, as each pupil started at his own level according to his test score and progressed into subsequent units according to accuracy and progress test results, all students did not use all the units.

Because of the fact that all pupils did not start at the same level, it was necessary to insert direction cards at the beginning of each level.

¹⁰Edward L. Thorndike and Irving Lorge, The Teacher's Word Book of 30,000 Words. New York: Bureau of Publications, Teachers' College, Columbia University, 1952.

When a student decided on which level to start according to his individual needs, he was instructed to take the key word card, and the bundle of synonyms and antonyms from the envelopes. As he worked he was told to place the key word card in the middle, the synonym slips to the right and the antonyms to the left of the key words. When he had completed this process and checked doubtful words with a friend who was working on the same drill, then he was to replace the card and slips in the envelope and go on to another exercise. This might be more vocabulary, Reading for Meaning, or something entirely different. The process of matching synonyms, antonyms, and key words was to continue throughout the twenty-five units on which the student was working unless he decided that the level was too simple. If his accuracy were high on several units, he could take the first test which was provided with each level and check it with the key. Since the test covered the whole level of Reading for Meaning words, a score of 80 percent or better was considered adequate and he could go on to the next level. If he received less than 80 percent, he completed the rest of the exercises before taking Test Two for the level. His accuracy score was then recorded on Test Two and he went on to the next level. The teacher could note accuracy scores and give help where needed.

This process of matching words was sometimes done under time pressure with the Mahal Facer as a gauge. The number of word associations completed correctly in a given time limit were scored and gains in number of associations could be observed. No final vocabulary test was given, so no accurate evaluation of this part of the experimental study was made.

(The key words, synonyms, and antonyms by units and levels are in Appendix

B along with the tests and keys for each level).

Multiple Meaning Word Association Drill. Multi-meaning words were compiled into lists according to their degree of frequency in print. These words were chosen from Thorndike and Lorge's Word Book of 30,000 words.¹¹ One list was based on the "AA" words; another, on "A" words, and a third list on "49-20" frequencies.

A student picked up a card with three categories listed on it. From the list "AA" words he could see how many would fit into any of these three categories. Frequently a word would fit under all three categories because of multiple meanings. An example would be:

Categories:

| <u>Baseball</u> | <u>Politics</u> | <u>Business</u> |
|-----------------------------------|-----------------------------------|------------------------------------|
| run (home run) | run (for governor) | run (on the market) |
| base (position on a diamond base) | base (central place of operation) | base (level) |
| strike (attempted hit) | | strike (at a mill) |
| canned (benched) | canned (talk) | canned (fired) |
| dead (stopped ball) | dead (inactive politically) | dead (defunct) |
| hit (connect with ball) | hit (popular appeal) | hit (meet with failure or success) |

Association with multiple meaning words was sometimes used under time pressure with the Mahal Pacer. The number of associations made in a given time limit which could be justified were recorded. Progress in rapid association was indicated when the number of words lengthened on successive category cards. The "AA" list proved to be the most suitable for work within time limits.

¹¹Thorndike and Lorge, Op. Cit.

It was assumed that multiple meaning association drill might develop fluency of ideas, depth in vocabulary knowledge, and heightened awareness of word meanings. It might develop critical thinking skills as well. Considerably more research would be needed to test any of these hypotheses. Students who tried this work liked it for its novelty and challenge. The materials were suitable for a wide range of ability levels because more able students saw more implications in the words and less able students found the words meaningful in some known connotations. Evaluation with so many variables present would have been pointless, and therefore no evaluation was attempted.

Vocabulary meaning through context clues. The vocabulary meaning from context was given only at the tenth, eleventh, and twelfth grade levels. Four different issues of Reader's Digest, Educational Edition, were used for this practice. These were the same Digests used in the marked book pacing speed development described in Chapter II. As the exercises progressed in order of approximate difficulty in each issue of the Digests, the simpler ones were chosen for the tenth level, more difficult ones for the eleventh, and the most difficult for the twelfth level. There were six exercises each for levels ten and eleven and seven for twelve.

The words for the context drill were taken from the exercises in the center section of the Digest, titled, "What's Your Word Power?" The page, column, and line were copied with the word on the list. This was done to force the student to look up the paragraph containing the word

and to arrive at meaning from context clues without seeing the suggested synonyms in the Digests.

Several kinds of development were provided by this procedure. First, the student had practice in skimming to locate a specific fact. Second, he was forced to read for meaning. Third, he copies the word, thus forcing attention on word contour, spelling, and familiarity with the word. Fourth, practice in verbalizing and expressing his ideas was provided by writing the definition. Lastly, the final word matching in the Digest, "What's Your Word Power?" gave confirmation to thinking, immediate knowledge of success, and further practice with the word in another meaningful situation.

The words from the Reader's Digest exercises were typed on small oaktag cards according to the color scheme established throughout materials in this experiment with which the pupils were familiar. Directions were repeated at the beginning of each level as pupils started according to their needs. They could work in pairs if they wished. Students were directed to find the Digest named on the list of words and to locate the word by skimming for it on the page and line indicated. When they located it, they read the paragraph which contained the word and wrote the meaning suggested by the context. To do this they lined up the typed oaktag exercise with the lines on their own papers and wrote the word and its meaning. After the meanings were all determined the exercise under "What's Your Word Power" in the Digest was used as a test of mastery of word meaning. Directions were given at the end of each exercise indicating other exercises and Digests at the level on which they were working.

Tests and Keys were provided at the completion of each level. If the students passed the tests successfully, they moved up to the next level.

In summary, the Reader's Digest exercises gave practice in the following reading skills:

1. Following directions.
2. Skimming to find specific words.
3. Reading for meaning.
4. Writing the word with its meaning.
5. Defending opinions by working in pairs or groups.
6. Checking the meaning in further practice.

IV. APPRAISAL AND CONCLUSIONS

Use of materials. The number of students who used this material is presented in Table XI. In many respects this use was somewhat limited, but this might be because the students already had had fairly extensive work of this kind.

TABLE X

NUMBER OF STUDENTS USING THREE KINDS OF VOCABULARY EXERCISES

| Type of Exercise | Number | Per Cent |
|--|-----------|----------|
| Synonym and Antonym Word Association | 43 | 37.7 |
| Word Association on Multiple Meaning | 42 | 36.8 |
| Vocabulary from Context Clues - <u>Reader's Digest</u> | 6 | 5.3 |
| Total number of students in experiment | <u>91</u> | |

6

The three types of vocabulary exercises were used in varying degrees. The Synonym-Antonym, and Multi-Meaning Association Exercises were used more than the Vocabulary from Context. This was probably due to the fact that these exercises were more intriguing because of their novelty and color appeal. However, the context exercises were valuable, sound, well-developed and were probably better suited to the high vocabulary level of the students than were the two other types of exercises that were more widely used.

Because of the ready availability of the Digest materials and the values inherent in the method described herein for their use, it is recommended that teachers try out in further practice. The words with page, column, and line, could be written on the board and no further

work preparation would be needed. The teacher should briefly call attention to the real developmental values of going through each step so students will be fully motivated. Value of words could be emphasized by occasional inclusion in subsequent use by students and teachers alike. The vocabulary materials as provided in the Digest are of relative difficulty levels, all ready for meeting individual differences at three different levels. Their availability and the feasibility of this plan should encourage wider use.

Test scores on vocabulary test score data on the Iowa Test of Educational Development, Test 5, General Vocabulary, are presented in Table XI.

CHAPTER V

MAPS, CHARTS, AND GRAPHS

I. INTRODUCTION

Purpose. Because of the omnipresence of visual aid material, it is necessary that students learn to read it. The purpose of this study is to locate and design material developing ability to read maps, charts, and graphs which could be used in mass differentiated teaching of skills, and to see if when used in this way they contributed to the growth and development of these skills.

Justification. An old Chinese proverb states "One picture is worth more than ten thousand words".¹ Maps, charts and graphs are types of pictures. They portray facts in an attempt to clarify ideas through visual impact. These illustrations are found in all types of publications. They are used in lectures and film strips and many books, including text books throughout the entire high school and college curricula and are widely used throughout life. That they are abundant in periodicals and newspapers is evidenced by the fact that most of the teaching materials on maps, charts, and graphs used in this study were obtained from trade and professional journals, popular periodicals, newspapers and transportation lines.

Advertising campaigns make great use of tables and graphs to show

¹Christopher Morley (ed.), Louella D. Everett (ass't. ed.), Familiar Quotations Collected by John Bartlet (Boston: Little, Brown and Company, 1948), p. 1213.

how much better a certain cigarette or detergent or furniture polish is than the inferior Brands X, Y, or Z. Airlines show their flight routes on attractive maps. Gas stations give away road maps. Political campaigns use many maps, tables, and graphs showing the activities of the favored candidate and the supposed preference for him by the people. Advertisers, lobbyists, propagandists, workers for good and bad causes, teachers, scientists, salesmen, bankers, physicians, mathematicians, educators, statesmen, all these and others use maps, charts, and graphs to add force and clarity to their words.

Need. The search for information and materials for the teaching of the reading of maps, charts, and graphs was made difficult by the scarcity of published materials that were designed to teach these skills. Spitzer has this to say about the teaching of the reading of maps, charts, and graphs,

Since instruction in reading maps, charts, and graphs occurs more or less incidentally as part of the instruction in several subject areas, the amount and quality of such teaching vary widely . . . The level of achievement in the country as a whole, therefore is probably lower than desirable.²

II. REVIEW OF LITERATURE

Dolch's³ chapter on reading pictures is directly applicable to the reading of maps, charts, and graphs. He says,

²Herbert F. Spitzer, Spitzer Study Skills Tests Manual of Directions (Yonkers-on-Hudson, New York: World Book Company, 1954).

³Edward William Dolch, Problems in Reading (Champaign, Illinois: The Garrard Press, 1948), pp. 362-368.

Very few people realize that we have to teach children to read pictures. The average person assumes that he has just to look at a picture to see what is in it. He knows what he himself sees in a picture. He does not realize that others may see something quite different or may see vastly more than he does. Of course, if he had ever discussed a picture at any length with a group of other people, he would have discovered what the psychologists have long since demonstrated: one sees in a picture only that which arouses his own past experience. He sees what he knows.⁴

It is the teacher's job to call attention to that which is new, and to help the child in seeing relationships and drawing conclusions. In order for a chart and text to supplement each other, the chart must be fully understood in all its implications so that it becomes a pictorial supplementary text to strengthen and broaden the concept being studied.

Cleary⁵ lists six skills necessary for pupils to have in order to use and enjoy books. Numbers four and five of these are concerned with the reading of maps, charts, and graphs:

4. Understanding the value of charts and graphs in nonfiction and facility in their use.

(a) Instruction in using charts including such aspects as: the value and use of different kinds of charts — time tables, flow charts (family trees), comparison charts, and pictorial charts — and the value of charts showing relationships and comparisons.

(b) Pupil-teacher discussion of kinds of information gained in the skillful reading of graphs. Points to be emphasized include: the use of graphs to illustrate changes and differences; the use of bar graphs to illustrate quantitative differences such as differences in temperature; the use of a pie or circle graph to illustrate relative percentage of the whole (such as the portion of the national income or money spent on soft drinks); the use of picture symbols to show comparisons.

5. Understanding how to read maps and use atlases.

(a) Instruction in map reading to include: using the index or lists of maps in atlases to locate the required map; using the grid lines to locate specific places on the map; noting the scale of a map and computing differences in distance; identifying symbols and legends;

⁴Ibid., p. 362.

⁵Florence Damon-Cleary, Blueprints for Better Reading (New York: The H. W. Wilson Company, 1957), pp. 184-185.

using different kinds of maps such as: physical, commercial, economic, historical, political, outline, and air-age maps.

⁶ (b) Examination and study of atlases, their arrangement, scope and use.

Fay⁷ has studied the relationship between specific reading skills and achievement in arithmetic, social studies, and science in the sixth grade. He found a correlation between skill in reading maps, charts, and graphs, and tables and high achievement in social studies. He reaches these conclusions.

Reading should be thought of as a composite of many specific skills rather than a generalized ability . . . Some reading skills are related to achievement in a given subject matter area and others are not . . . Research should furnish and teachers of the various subject matter areas should know the reading skills related to success in the subjects they teach. The implication of this conclusion for teacher training programs is obvious.⁸

This would seem to indicate an area in the teaching of reading which has been widely neglected. This evidence of neglect of development of skills in reading visual aids was strengthened by the students at Lynnfield High School. Those taking part in the reading program were asked to write on a slip of paper the skills on which each thought he was weak. Not one of the voluntary participants in this program thought of this very important study skill. Yet, when tested in this area, they were found to be more deficient in this kind of skill than in most other areas.

⁶Ibid., p. 185.

⁷Leo C. Fay, "The Relationship Between Specific Reading Skills and Selected Areas of Sixth Grade Achievement", Journal of Educational Research, 43 (March, 1950), pp. 541-47.

⁸Ibid., pp. 546-47.

III. MATERIALS AND HOW THEY WERE CONSTRUCTED

The presence of only one teacher taking care of a large number of students working on different study skills necessitated a very large number of items upon which the students could work independently. The scarcity of published teaching materials compelled the preparation of original exercises.

All available expendable periodicals and newspapers were searched for maps, graphs, and tables of all kinds.⁹ The ones that seemed suitable were cut out. It was found by trial and error that certain qualifications had to be met:

1. The illustrations had to fit on a 9" x 12" sheet of oaktag and still leave room for four or five questions.
2. The illustrations had to be on subjects preferably interesting to, but at least suitable for, high school students.
3. The paper had to be firm enough to prevent the rubber cement from going through. Magazines were found to be better sources than newspapers because of this.

Only one copy of a particular issue of a periodical was necessary because there was no duplication of material. Exact duplication of any item was unnecessary because pupils were to work individually on differentiated skills.

Roadmaps of various areas were obtained at gas stations. Timetables were picked up at tourist agencies, railroad stations, and the airport. It was necessary to buy almanacs and atlases and the few books that could be found to be guides for some of the questions to be asked on each one of the maps, graphs, and tables.

Sixty maps, graphs, and tables were chosen from the many previously collected. They were divided into four groups, and to each group a color

⁹The most useful publications for teaching materials were the National Geographic Magazine and weekly news magazines. (See Chapter 1, p.22)

was assigned to agree as much as was practicable with the color levels of other skills used in this study. Tables, Level 1a, were mounted on green 9" x 12" oaktag. Bar Graphs, Level 1b, were mounted on blue 9" x 12" oaktag. Line Graphs and Pie Graphs, Level 2, were mounted on pink 9" x 12" oaktag. Maps, Level 3, were mounted on manila 9" x 12" oaktag. Either four or five questions were printed below or beside each map, graph, or table. Level 4 consisted in part of questions whose answers were to be found by study of an atlas, almanac, road map, time table, or weather book. In each case, there was one comprehensive question printed on the outside of a large manila envelope. The material in which the answer was to be found was placed in the envelope. Included in Level 4 were some maps which seemed to be more difficult to interpret than those in Level 3. The Level 4 maps were mounted on orange oaktag and had the customary four or five questions. Each item was numbered and an index tab with the proper number was attached to it.

SYSTEMATIC PLAN OF MATERIALS

| Level | Color | Numbers | Content |
|-------|-----------------------|---------|---|
| 1a | green | 1-15 | Tables |
| 1b | blue | 16-30 | Bar Graphs |
| 2 | pink | 31-45 | Line and Pie Graphs |
| 3 | manilla | 40-60 | Maps |
| 4 | orange (envelopes) | 71-85 | Atlases, Almanacs, Road maps, time tables, weather books, and more difficult maps |

Answer cards were prepared in matching colors with corresponding index tabs. All the answer cards of Level 4 were orange. Numbers 61-70 were left open so that, if needed, other material could be inserted below the most difficult level.

These materials were not tested for gradations in difficulty. From examination of materials the difficulty appeared to increase from Level 1

to Level 2, from Level 2 to Level 3, and from Level 3 to Level 4. However no empirical studies were made to show comparative difficulty and there was no proof of an actual ladder of increasing growth in complexity.

IV. FINDINGS

At the beginning of the seven week period at Lynnfield, the students' mean score on the Spitzer sub-test three, reading of maps, charts, and graphs, was at the sixtieth percentile on grade eleven norms, at the fifty-fifth percentile on grade twelve norms. There was also a very wide range in the individual student scores. Of all the skills tested at this time, reading of maps, charts, and graphs and outlining scored the lowest. The incidental teaching of graphic reading skills is obviously not taking care of the needs of this very high achieving college preparatory group. Data on the before and after test results are presented and discussed in Chapter VI.

V. SUMMARY

In spite of the fact that at the beginning of the study no student listed the reading of maps, charts, and graphs as a needed skill, more students used the maps, charts, and graph materials than any other materials that were provided. Out of the 114 students, 105 students, or 92 per cent, used exercises on maps, charts, and graphs. Since these materials were varied, colorful and timely, these factors may have attracted the students rather than a genuine felt need. The fact remains, however, that the students did use the materials very extensively.

The testing devices in this area are few, and the ones available

do not cover recently developed concepts in cartography. For example, polar maps and other kinds of projections are not included in the tests but are widely found in current books, periodicals, and advertisements.

The materials developed for use in this study contained these modern concepts since they were drawn from current periodicals and journals.

The experience working in this area indicates a cogent need for sequentially developed and extensive teaching and testing materials, in reading of graphic materials.

CHAPTER VI

ADMINISTRATION OF THE PROGRAM

I. INTRODUCTION

The Problem. Chapter I defined the intent of this study to organize and conduct a reading class which met the individual needs of over one hundred high school students. This required not only carefully constructed materials but also efficient methods of administration and supervision. The materials must be essentially self-teaching; the system must be essentially self-directing.

Purpose. The purpose of this chapter is to describe and clarify the administrative procedure designed to meet this requirement. An explanation of the original theory will be followed by a description of the program as it actually evolved. The chapter will conclude with recommendations of adaptations for successive programs of this kind.

Qualifications. The materials used in this study are described in the preceding chapters. Therefore they will receive consideration in this chapter only with respect to suitability as revealed during the operation of the program, and adaptations in structure which were necessary.

II. PRE-PLAN

Arrangements with the school. The students registered for the program on a voluntary basis. There were no excused absences from the regular sessions after the first week of the program. Make-up work, detention, driver-education, and other academic activities were taken

care of on afternoons other than those on which the reading class met. All extra-curricular activities were scheduled for after three o'clock.

Student folders. Theoretically, communication between the student and the instructor was to be transmitted largely through the student's folder. A manilla folder was prepared for each student. The student's name was typed on a gummed label and pasted to the folder tab. A progress chart with space for various types of graphic representation of the scores for each set of materials was taped inside the front cover of the student's folder. A series of duplicated sheets was stapled to the inside of the back cover. These included the directions for using, scoring, and recording the scores for each set of materials, a per cent correct table, and a guide to the marked articles and comprehension quizzes in the Reader's Digest. A copy of each of the above mentioned sheets may be found in Appendix A.

Administrative procedure. The folders were arranged alphabetically in four file boxes labeled "A - D", "E - I", "M - R", and "S - Z". Upon entering the cafeteria each afternoon the student would pick up his folder and look at his progress chart. A red check mark indicated the areas in which he could work and the level of difficulty at which he should begin.

The student decided the relative amount of time he would spend on each skill, and the order in which he would proceed. A single vertical red line at the end of any row of scores on the progress chart indicated to the student that he was ready to take a test. A subsequent satisfactory score on the test promoted him to the next higher level.

An unsatisfactory test score indicated that the student needed further work on his present level. Two vertical red lines at the end of any row of scores indicated that the student's work was satisfactory and that he should procede to the next higher level.

All papers were left in the folder for at least a week. This enabled the instructor to check on the cause of low scores and the areas in which the student was experiencing the most difficulty.

Special group instruction. One of the most essential features of this type of mass instruction is a practical method of singling out those students needing special help. When a significantly large group of students showed a particular weakness, as revealed by their recorded test scores or their papers, they were put "On The Spot". A large hexagonal cut from red construction paper was inserted in the folder of students having a specific difficulty. This was the first thing the student was instructed to look for when he opened his folder. It meant that he was to meet with the group and the instructor behind the screen in the faculty section of the cafeteria. "The Spot" was also used to assemble homogeneous groups for the introduction of new material.

Storing and transporting material. Space for storing the materials was arranged in a supply room located just outside the cafeteria. An extra cafeteria table was fitted with roller casters so that the microphone, amplifier, and all reading materials, once they were arranged on the table, need not be moved. At the beginning of each session the table was to be rolled from the supply room to the center aisle of the cafeteria, and returned at the end of the session. The material could

not be left in the cafeteria for obvious reasons, nor could it be taken into the cafeteria until two o'clock because the room was being used for a study hall until that time.

III. OPERATION AND ADAPTATIONS

Introductory meeting. The first meeting was conducted by Dr. Mabel S. Noall, with assistance from Mrs. Alice Wilson and Miss Gordon. Insofar as possible, each student was given his folder. However, there were one hundred and thirty students present and one hundred and seven folders had been prepared. Some students who had signed up for the program were unable to attend this introductory session, while others who had not officially registered had been told that they could do so at this meeting.

The phrasing test (see Appendix A) was administered and each student determined his reading speed using an article from the Reader's Digest.¹ After completing a comprehension check of six questions, the students were instructed to enter their speed and comprehension scores in the appropriate spot on the Reader's Digest chart.

The correct use of the Paced Reading Guide was explained (see Appendix A). There followed a demonstration of the Mahal Pacer, how to use each set of materials, and a thorough explanation of the operational procedure which the class would follow throughout the program. A large model of the progress chart was affixed to the wall and each step

¹T. Coleman Andrews, "Here's How Inflation Has Victimized You", Reader's Digest (April, 1960), 79-81.

described in "How to Keep Your Records" (See Appendix A) was demonstrated.

Physical limitations of the cafeteria. Certain problems were immediately apparent. The accoustics in the cafeteria were very poor. The ventilating system necessary for a room in which food is prepared and consumed was very powerful and very noisy. The microphone and loud speaker, although in good working condition, periodically gave out with strange and unwelcomed sounds. There were other interruptions such as the staff of the kitchen putting utensils away, and the Coca Cola representative filling the Coke machine. It was difficult for a student to rise, sit, or move in any way without making a scraping noise on the floor.

Lighting facilities were not ideal for reading. Because of the construction of the room, particularly the presence of six large square pillars toward the center of the room, there was no satisfactory location from which to address the students. The demonstration could not be seen by all of the students at the same time.

Teacher-directed activity. The total effect was that very few students had been able to hear and see all that went on during the introductory session and were not prepared to follow the original plan of self-directed activity. It was decided that two weeks be spent in specific teacher-directed activity, during which time each student would actually work on at least three kinds of material that he needed, as indicated by his test scores, for a minimum of two hours. The class was divided into small groups of thirty to forty students, or in the

case of material on the main ideas taken from Improving Reading Ability² the group would be limited to the number of exercises of that type. At the beginning of each session the students were told which group they were in and what material they were to work with. The instructor moved from one group to the next, first explaining what the material was designed to help them with, then helping them to get started. After starting the groups the instructor returned to the first group to answer questions. Thus the transition from the familiar techniques of working in unison in the classroom to independent self-direction was gradual.

Attendance record. A record of attendance was kept for each student on his individual folder in the following manner: any folders remaining in the file boxes after half past two were marked with the date and "ABSENT". This manner of keeping the attendance record where the student was constantly aware of it, rather than in a teacher's record book, proved very successful. It was a reminder that they would have to work harder to make up the time they had lost. It made clear to the student that his absence had not been overlooked.

Assigning reading material. During the first two weeks the final preparations were made so that the original plan could be followed beginning with the third week. The level of difficulty at which a student began the comprehension material was assigned according to his score in the test battery (See Chapter I). To avoid confusion during

²James B. Stroud, Robert B. Ammons, and Henry A. Bomman, Improving Reading Ability (New York: Appleton-Century-Croft, Inc., 1956).

initial period of self-directed work, the number of exercises available for any given level was considered in determining which test scores were to be assigned to that level. For instance, students in the range of fifty to sixty-four on the Iowa Tests of Educational Development were assigned to the Reading for Meaning³- Yellow. There were twenty exercises at this level for the eighteen students whose scores fell within this range. Had the range been fifty to sixty-five, twenty-five students would have been assigned to this level. It was felt that this practical, though seemingly arbitrary, method of assigning starting points would have no detrimental effect on the student's progress because the program provided for promotion to the next higher level as soon as the student's performance indicated that he was ready.

Addition of advanced material. The group of students with whom this program was inaugurated proved to be atypical with respect to their academic achievement. Although the range of abilities was wide, the achievement curve was skewed toward high achievement. Many of the students had been drawn from the accelerated college preparatory class. Some had exceeded the 99th percentile of the Iowa Tests of Educational Development. The Mahal Pacer enabled these students to concentrate on speed with one hundred per cent accuracy on relatively easy material, but this technique has to be balanced with materials that the student finds challenging if real growth is to occur. Consequently materials of a more challenging nature were added to the program.

³William S. Guiler and J. H. Coleman, Reading for Meaning (Chicago: J. B. Lippincott, 1955. Revised).

These more advanced materials which were added to those in the original plan, and therefore not included in the progress chart and direction sheet, were accompanied by a page of directions explaining how to use them, and, whenever possible, a graph or chart for recording the student's score was included on the same page as the directions. The most convenient method indicating to the student that he was to work on these materials was to write it on the front cover of the student's folder. It was explained to the student that if he found the name of a new set of materials on his folder, he was to go to the table identified by the appropriate sign, take a duplicated copy of the directions from the manilla folder and one of the exercises, and proceed according to the directions.

Permanent work stations. A system of setting up the cafeteria evolved which added much to the smooth operation of the program. Large oak-tag signs were affixed to the wall of the cafeteria and to the square pillars toward the center of the room. Each sign bore the name of the set of material which was placed in that section of the room at the beginning of each session. In the beginning certain students were asked to place the material in the correct positions. However, it was soon arranged that the first students who entered the cafeteria took the material that they wished to work on with them to the appropriate spot in the room. The sign, which was left in place for the duration of the program, also served to publicize the program. These work stations eliminated confusion in locating materials, and made it easier for the instructor to supervise the activity by grouping the students as to the

type of skill they were working on.

Revision of directions and material. During the course of the program certain adjustments were made to facilitate handling of the material. The answer keys for the Reading for Meaning exercises were stapled to the lower right front corner of each exercise sheet. Directions for using the material had to be made more precise than was originally thought necessary. Copies of the revised directions were made and distributed to each student for referral to at any time.

Independent work. Beginning with the third week of the program the students worked independently to improve their reading skills. They were told the time intervals at which the Mahal Pacer would ring so that they could time all their work. The decision as to the amount of time to be spent on any area and the order in which they were done was left to the student.

The truth in the theory that students consider their time valuable and will use it wisely was apparent in this situation. There was no discipline problem. Students did not wait while someone else finished an exercise or paper was being passed out. The progress chart enabled the student to see his progress and his weaknesses. He did not have to take the teacher's word for it, but became personally involved in improving his record. He was neither pushed nor held back by the instructor or other students, and was competing only with his own record of time limits and scores.

Students worked willingly, finding the material challenging though not defeating. No student was ever faced with material that was too

difficult for him. Many students remained after three o'clock to finish their work. Other requested permission to take materials home with them. The atmosphere brought about by this type of program proved to be very conducive to progress and hard work.

Use of material. Not all students used all the materials available. Table XI indicates the number of students who used each type of material, as well as the corresponding per cent of the total group. In addition to the factor of need, as revealed by test scores, such factors as novelty and structural appeal seemed to influence the student's choice of material. For instance, the Synonym-Antonym Word Association exercises (See Chapter II) were colorful and manipulative. The students never had worked with exercises of this type, whereas the vocabulary from context, Reader's Digest exercises, were very similar to the type of vocabulary work the students had done in their regular classes.

The fact that the exercises in the Maps, Charts, and Graphs material were taken from current periodicals contributed much to the popularity of these exercises. Recent statistics concerning American and Foreign automobiles proved to be a very potent subject with high school students.

TABLE XI

NUMBER OF STUDENTS EVIDENCING USE OF EACH TYPE OF MATERIAL AVAILABLE

| Material | Number | Per Cent |
|--|--------|----------|
| Maps, Charts, and Graphs | 102 | 80.7 |
| <u>Reader's Digest</u> Marked Speed Reading | 99 | 86.8 |
| Phrase Reading Exercises | 87 | 76.3 |
| <u>Reading for Meaning</u> Exercises** | 86 | 75.4 |
| Following Directions | 50 | 43.9 |
| S.R.A. College Prep Laboratory | 44 | 38.6 |
| Synonym Antonym Word Association | 43 | 37.7 |
| Word Association on Multiple Meanings | 42 | 36.8 |
| Critical Thinking | 17 | 14.9 |
| Organization Exercises on Strang** | 17 | 14.9 |
| Vocabulary from Context - <u>Reader's Digest</u> | 6 | 5.3 |

* W. S. Guiler and J. H. Coleman, Reading for Meaning, Revised. (Chicago: J. B. Lippincott, 1955).

** Ruth Strang, Study Type of Reading Exercises, Revised Edition. (New York: Bureau of Publications, Teacher's College, Columbia University, 1956).

IV. RECOMMENDATIONS FOR FUTURE PROGRAMS

Introduction of the program. A reading program such as has been described in the preceding pages depends on each student's having a thorough understanding of what the material is designed to do, the general procedure of the program, and how to use each type of material.

It would seem that the most feasible method of insuring this would be to introduce the program to groups of approximately thirty students before the students met as a single group to begin working on their own. This would solve the problem of having large numbers of copies of material that is being introduced to each student, copies that would not be needed thereafter. It is not practical nor necessary in the overall program to have one hundred and thirty copies of everything. Often a single copy suffices. Yet each student must actually work through at least one exercise of each type. Otherwise he cannot know what questions he will have about the material. A single instructor can answer the occasional question that will arise when more than one hundred students are working in a room, but it is not possible to answer questions in the quantity in which they arise when students are working through a new type of exercise for the first time.

Diagnostic tests. In order to insure that each student uses the material which will be most beneficial to him, the instructor should have the results of a diagnostic reading test for each student. Achievement tests, such as the Iowa Tests of Educational Development, are helpful in assigning the material but their major function is in evaluating the program as a whole and in determining the amount of progress each student

has made. Diagnostic tests should be given as part of the pretesting program. These tests should be simple enough so that the student himself could take the test, score it, and interpret the score. The face validity of the test must be obvious to the student so that he will accept the weakness it reveals.

Importance of precise directions. The program depends heavily on the student's ability to follow directions without constant supervision, but the directions must be clearly expressed, accurately duplicated, and correct in every detail. Nothing can be assumed. Directions should not be copied from workbooks that the material is taken from. It is more satisfactory to construct from the beginning directions which will fit the particular situation. If the material is constructed by mounting actual workbook pages on oak tag, any directions appearing on the pages should be crossed out so as not to confuse the student. Answer keys and quizzes should be carefully checked for typographical errors. The student must have respect for the accuracy of both the directions and the answer keys.

In general, only material which has been carefully tested and evaluated through repeated classroom use should be used.

V. FINDINGS AND RESULTS OF TESTING

Information concerning the testing of one hundred and fourteen students prior to the beginning of the program is contained in Table I of Chapter I. Because of the lack of time for administering all of the tests in the pretest battery, and because many students earned scores at the ceiling of the tests, post-testing was limited to the following tests:

1. Iowa Tests of Educational Development - Test Five
(Reading - Social Studies)

2. Iowa Tests of Educational Development - Test Eight
(Reading - Vocabulary)

3. Spitzer Study Skills Test - Part Three
(Maps, Charts, and Graphs)

It was not the purpose of this study to evaluate in detail either the materials or the method of operation, but rather to ascertain a method of organizing and administering such a program within reasonable limits of time and effort. However, the results of the post testing are presented in Table XII. Only those students for whom complete testing information was available were included. Although a control group was carefully chosen, it was not possible to get adequate post test information on this group. As indicated in the table, the gain in all three areas covered by the tests is significant at the 1 per cent level.

TABLE XII

COMPARISON OF READING TEST SCORES BEFORE AND AFTER THE PROGRAM

| Test | Number | Mean | Standard Deviation | Standard Error of the Mean | Critical Ratio | Significance |
|------------|--------|-------|-----------------------|-------------------------------|-------------------|--------------|
| I.T.E.D. 5 | | | | | | |
| Pretest | 65 | 19.6 | 4.604 | .575 | 2.74 | significant |
| Posttest | 65 | 21.8 | 4.381 | .542 | | |
| I.T.E.D. 8 | | | | | | |
| Pretest | 63 | 21.4 | 4.847 | .603 | 3.49 | significant |
| Posttest | 63 | 24.2 | 4.180 | .536 | | |
| Spitzer 3 | | | | | | |
| Pretest | 63 | 28.06 | 4.067 | .516 | 4.57 | significant |
| Posttest | 63 | 31.4 | 4.219 | .537 | | |

VI. SUMMARY

In the interest of effective operation of a program for mass differentiated instruction in reading skills, provision must be made for the following.

1. A test battery
2. A predetermined correlation between test scores and the program material
3. Introduction of the program, both operational procedure and materials, to groups of approximately thirty students
4. A file folder for each student which includes:
 - a. progress chart, a graphic representation of all work
 - b. Per Cent Correct Table to aid in rapid scoring of exercises
 - c. general directions explaining the operational procedure to be followed
 - d. directions for using, scoring, and recording the score of each type of material
5. The reading material itself, clearly labeled as to reading skill, arranged in ascending levels of difficulty, and including all facilities necessary for the student to evaluate his own performance on this material
6. A variable timing device that directs the activity of the entire group, namely the Mahal Pacer

The Mahal Pacer, the initiative and responsibility of the students for directing their own work, and of course the material itself were among the factors affecting the student's performance on the post tests. At this point we are not prepared to state that any particular material or method had a significant effect on the test results. This program is presented as a feasible and practical method of meeting the individual needs of a large group of students in a single reading class. It is hoped that further study will be done in the interest of refining and improving this type of program.

CHAPTER VII

SUMMARY

In attempting to develop a program of this sort, where a large group of high school students were to be taught a variety of reading skills and still provide for individual differences in intelligence, level of reading ability, speed of reading, and progress rates, many problems were faced and had to be solved. Programs providing for individualized reading have been set up, but few structured individualized programs are now in existence due to the multitude of problems that are ever-present in large scale teaching.

Since the vital core of this program existed in knowing what each student could do and where he was to go, a test battery was a necessary component. Once the ranges were established, material was prepared for each level in each particular skill to be taught. It cannot be stressed enough that the material, if not from published workbooks, had to be classroom tested several times before being put into the reading program. This pretesting was an attempt to foresee any complications beforehand in order to prevent undue problems when the students were in the room waiting.

The materials were arranged, always clearly labeled, in boxes or individual sections of the room so that they could be reached, removed and replaced without disrupting the order of the materials, the current teaching, or the concentration of the other students.

The speed of reading materials needed a definite timed work period

so that greater gains could be made in a specific time. The progress charts had to be kept daily so that more statistical results as well as student improvement could be seen. As great a variety of materials as was possible covering all the reading and learning rates had to be provided.

The organizational materials had to be carefully and creatively prepared since these were usually in very common use and could prove boring to the students if not presented in some different or unusual manner. Colorful, timely, and varied materials had to be prepared in all the skills and certainly added to the enticement of the program and to the desire of the students to learn.

Each student had to have his own materials' folder so that a constant communication between the teacher and student remained effective. All the blank answer keys, progress charts, overall instructions and notes to the students were stapled into the folder. As the meetings progressed, any new materials used by the student or handed out by the teacher were kept in the folder for future reference.

Since each student was to be master of his own destiny for the period of time involved in the program, he had to be made to realize the importance of listening to instructions and immediately getting to work. Once the bulk of the students were seated, had their materials, and were prepared to work, the teacher was free to begin small group work, if necessary.

Small annoying problems, which will turn up in any program, such as the break-down of a loud-speaker system, loud noises from the ventilating

system, and refreshment machine attendants at work, were experienced, even though there was preparation designed to obviate such nuisances. Therefore if the program was to continue despite these interruptions, complete organization of every other facet was extremely important.

Attendance records of every student as well as a record book containing spot checks of the student's work served as an additional reminder to the teacher of those students who needed special help or make-up work.

At any time thought necessary, the teacher attempted to revise or improve some of the materials if it had been found to be too easy or too difficult. Success of the students at any level of any skill was the most positive aspect of this program. When success was attained, the student's desire was continually motivated.

This study showed with significant results that large groups of students can be taught many and varied skills in reading and still be provided for with regard to individual differences in intelligence, level of reading ability, speed of reading, and progress rates. It cannot be determined from this study whether the materials, the methods, or the distinctiveness of the program provided for the learning. However, with further research and programs of this type on a more controlled level, it is hoped that more definite results will be reached which will make such a large scale program extremely valuable for the large incoming groups of students in secondary schools.

BIBLIOGRAPHY

- Anderson, Irving H. and William C. Morse. "The Reading of Veterans", Journal of Educational Research, 47 (October, 1953), 96-106.
- Bernstein, Margery R. "Relation Between Interest and Reading Comprehension," Journal of Educational Research, 49 (December, 1955).
- Best, Charles E. "An Experiment in Reading Improvement," National Association of Secondary School Principals, 36 (January, 1952), 89-96.
- Bliesmer, Emery P. "Reading Abilities of Bright and Dull Children of Comparable Mental Ages," Journal of Educational Psychology, 45 (1954), 321-31.
- Board of Education of the City of New York. "The Retarded Reader in the Junior High School," Bureau of Educational Research Publication, 31 (September, 1952).
- Bond, Guy L. and Eva Bond. Developmental Reading in High School. New York: The Macmillan Company, 1941.
- Broening, Angela. "Abilities Which Contribute to Effective Reading," Education, 62 (September, 1941), 11-17.
- Brown, James I. "A Pacing Technique for Classroom Teaching of Reading," College English, 18 (December, 1956), 164-165.
- Burkhart, Kathryn. "An Analysis of Reading Abilities," Journal of Educational Research, 38 (February, 1945), 430-39.
- Cardwell, Irene. "Adult Reading Improvement Without Machines," School and Society, 82 (September 3, 1955), 71-62.
- Cleary, Florence Damon. Blueprints for Better Reading. New York: The H. W. Wilson Company, 1957.
- Cole, Luella. The Improvement of Reading. New York: Farrar and Rinehart, 1938.
- Coon, Horace. "How to Spell and Increase Your Word Power," The New American Library of World Literature, 1959.
- Davis, Frederick Barton. "Comprehension in Reading," Baltimore Bulletin of Education, 28 (January-February, 1951), 260-66.
- Dilley, Lois. "Every Teacher and Reading," The School Review, 52 (December, 1944), 597.
- Dolch, Edward William. Problems in Reading, Champaign, Illinois: The Garrard Press, 1948.

- Durrell, Donald D. Improvement of Basic Reading Abilities. New York: Yonkers-on-Hudson, World Book Company, 1940.
- Durrell, Donald D. Improving Reading Instruction. New York: Yonkers-on-Hudson, World Book Company, 1956.
- Durrell, Donald D. and Leonard J. Savignano. "Classroom Enrichment Through Pupil Specialties," Boston University Journal of Education, 138, Number 3 (February, 1955).
- Dyer, Helen F. "Exercises to Develop Reading Organization in Grade Five," Unpublished Master's Thesis, Boston University School of Education, Boston, 1949.
- Early, Margaret J. "About Successful Reading Programs," The English Journal, 46 (October, 1957), 395-405.
- Fay, Leo C. "Reading in the High School," What Research Says to the Teacher, 11 (September, 1956), American Educational Research Association of the National Educational Association.
- Fay, Leo C. "The Relation Between Specific Reading Skills and Selected Areas of Sixth Grade Achievement," Journal of Educational Research, 43 (March, 1950).
- Fee, Mary. "Functional Grammar and Its Relation to Correct English Usage," Abstract of Doctoral Dissertations in Education, University of Kansas Publications, 2, No. 6, (1941), 3-4.
- Flesch, Rudolph. How to Test Readability. New York: Harper and Brothers, 1951.
- Forlono, George and J. Wayne Wrightstone, "Measuring the Effectiveness of Specific Reading Instruction in Selected Vocational High Schools," High Points, 38 (March, 1956), 31-36.
- Fox, Lorene K. and Constance H. McCullough. "Individualizing Reading," NEA Journal, 47 (March, 1958), 162-63.
- Gates, Arthur I. The Improvement of Reading. New York: Macmillan Company, 1947.
- Gates, Arthur. "What Reading Says to the Teacher," Teaching Reading, 1, Department of Classroom Teachers, American Educational Research Association of the National Education Association (June, 1953).
- Glock, Marvin D. "Eliminating Obstacles to Effective Reading in College," Creative Reading in Classrooms and Clinic, 79, Supplementary Education Monographs, (December, 1953), 71-75.

- Goffi, Joseph. "A Comparison of Three Methods of Building Speed with College Freshmen," Unpublished Doctoral Dissertation, Boston University School of Education, 1960.
- Gray, William S. "Review of Reading," Encyclopedia of Educational Research, 3rd edition, (1960) 1100-1101.
- Gray, William S. "Summary of Investigations Relating to Reading, July 1, 1958 to June 30, 1959," Journal of Educational Research, 53 (February, 1960), 212.
- Gray, William S. "The Teaching of Reading," Encyclopedia of Educational Research. New York: Macmillan Company, 1960.
- Gray, William S. and Eleanor Holmes. The Development of Meaning Vocabularies, University of Chicago Press, Chicago, Illinois, 1938.
- Gray, William S. and Eleanor Holmes. "The Development of Meaning Vocabularies in Reading," Interpreting Language, An Essential of Understanding, Research Bulletin of the National Conference on Research in English, (1951).
- Hanley, Gertrude T. "An Evaluation of the Effect of a Program of Specific Training in the Skill of Organization in Improving Comprehension in the Fourth Grade," Unpublished Master's Thesis, Boston University School of Education, Boston, 1953.
- Harris, Albert J. How to Increase Reading Ability. New York: Longmans, Green and Company, 1956. Third Edition.
- Harris, Elizabeth H. "Helping the Slower Readers," Journal of the National Education Association, 33 (November, 1944), 187.
- Herber, Harold L. "An Inquiry into Effect of Instruction in Critical Thinking Upon Students in Grades Ten, Eleven, and Twelve," Unpublished Ed.D. Thesis, Boston University School of Education, Boston, 1959.
- Howell, Wallace J. "Work Study Skills of Adolescents in Grades VII-XIV," School Review, 61 (May, 1953), 277-82.
- Hughes, Vergil H. "A Study of the Relationships Among Selected Language Abilities," Journal of Educational Research, 47 (October, 1953) 97-106.
- Hulsman, Helen Louis, "Exercises to Develop Reading Organization in Grade Six," Service Paper, Boston University School of Education, Boston, 1947.
- Hunt, J. T. "What High School Teachers Should Know About Individual Differences in Reading," School Review, 60 (October, 1952), 417-23.

"If You're Interested in Teacher Supply," The National Elementary Principal, 37, No. 5 (February, 1958), 43-44.

Jenkins, Margaret, "Vocabulary Development: A Reading Experiment in 7th Grade English," Peabody Journal of Education, 19 (May, 1942).

Jespersen, Otto. Growth and Structure of the English Language. Garden City, New York: Doubleday and Company, Inc., 1956.

Johnson, Donald M. and Floy Reynolds. "A Factor Analysis of Verbal Ability," The Psychological Record, 4 (January, 1941), 183-95.

Johnson, Eleanor M., Modern Reading, Book I. Columbus, Ohio: Charles Merrill Co., 1950.

Johnson, Joan Ruth, "Evaluation of Exercises to Develop Reading Organization in Grade Six," Master's Thesis, Boston University School of Education, Boston, 1951.

Johnson, Mary E. "The Vocabulary Difficulty of Content Subjects in Grade 5," Elementary English, 29 (1952).

Kelley, Victor H. and Harry A. Greene. Better Reading and Study Habits. New York: Yonkers-on-Hudson, World Book Company, 1947.

Keneally, Katherine B. "The Relative Order of Difficulty of Several Types of Study Skills in the Intermediate Grades," Unpublished Master's Thesis, Boston University School of Education, Boston, 1939.

Kinder, Robert Farrar. "Types and Frequency of Difficulties in Secondary School Reading Skills," Unpublished Ed.D. Thesis, Boston University School of Education, Boston, 1957.

Kottmeyer, William. "Improving Reading Instruction in the St. Louis Schools," Elementary School Journal, 45 (September, 1944), 33-38.

Lewis, Norman. How to Read Better and Faster, Revised. New York: Thomas Y. Crowell Company, 1951.

Loring, Robert. "Marked Book Pacing Technique (Non-mechanical) Versus Free Reading," Unpublished Master's Thesis, Boston University School of Education, 1960.

McCart, William F. "An Evaluation of the First Two Years of a Secondary School Reading Program - 1955, 1956, 1956-1957.," Unpublished Master's Thesis, Boston University School of Education, 1958.

McCullough, Constance M. "What Does Research Reveal About Practices in Teaching Reading," English Journal, 46 (October, 1957), 475-90.

- McKee, Paul. The Teaching of Reading in the Elementary School. Boston: Houghton Mifflin Company, 1948.
- Miles, Isadora W. "An Experiment in Vocabulary Building in High School," School and Society, 61 (April 28, 1945).
- Morley, Christopher (Ed.) and Louella D. Everett (Ass't. Ed.) Familiar Quotations Collected by John Bartlet. Boston: Little, Brown and Company, 1945).
- O'Sullivan, Elizabeth. "A Summary of Research on Methods of Teaching Vocabulary in the Secondary School," Unpublished Master's Thesis, Boston University School of Education, Boston, 1949.
- Pei, Mario. Language for Everybody. New York: Pocket Books, Inc., 1956.
- Penty, Ruth C. Reading Ability and High School Drop Outs. New York: Bureau of Publications, Teacher's College, Columbia University, 1956.
- Piekarz, Josephine A. "Getting Meaning from Reading," Elementary School Journal, 56 (March, 1956), 303-309.
- Richey, Herman G. "Population Change," Encyclopedia of Educational Research. New York: Macmillan Company, 1960.
- Safford, Alton. "Evaluation of an Individualized Reading Program," The Reading Teacher, 13 (April, 1960), 266-270.
- Schlauch, Margaret. The Gift of Language. New York: Dover Publications, Inc., 1955.
- Shattuck, Marquis E. and Thomas Caulet. Steps to Good English for High School, Book One. Syracuse, New York: Iroquois Publishing Co., 1941.
- Sheldon, William D. and Shirley Hatch. "Strengths and Weaknesses in Reading in a Group of Sixth Grade Children," Elementary English, 28 (February, 1951), 88-91.
- Simpson, Elizabeth A. A Manual of Operation for the S. R. A. Reading Accelerator. Chicago: Science Research Associates, 1951.
- Smith, Edwin H. and Marie P. Smith. "Speed Reading in the Machine Age," College English, 20 (February, 1959), 242-244.
- Spitzer, Herbert F. Spitzer Study Skills Tests Manual of Directions. Yonkers-on-Hudson, New York: World Book Company, 1954.
- "Spotlighting Public Education in 1960," NEA Research Bulletin, 38 (February, 1960), 18-22.

"Statistics for 1957-58" NEA Research Bulletin, 36 (February, 1958), 9-12.

Strang, Ruth. Problems in the Improvement of Reading In High School and College. Lancaster, Pennsylvania: The Science Press Publishing Company, 1938.

Strang, Ruth, Constance M. McCullough and Arthur E. Traxler. Problems in the Improvement of Reading. New York: Mc-Graw-Hill Book Company, 1955. Second edition.

Strang, Ruth and Dorothy Kendall Bracken. Making Better Readers. Boston: D. C. Heath and Company, 1957.

Templeton, William. "Vocabulary and Success in College," School and Society, 51 (February, 1940).

Thompson, Warren Craig. "A Book Versus Machine Experiment in Adult Reading Improvement," College English, 15 (May, 1954), 470-473.

Tormey, Mary K. and Walter G. Patterson. "Developmental Reading and Student Evaluation," Journal of Developmental Reading, 2 (Winter, 1959), 30-43.

Umstadt, J. Q. and Robert. Q. Thornton. "Secondary Education Research," Encyclopedia of Educational Research. New York: Macmillan Company, 1960.

Westfall, Alfred. "Can College Students Expand Their Recognition Vocabularies?" School and Society, 73 (January, 1951).

Witherspoon, Younger T. "Predicting English Grades at the University of Utah," Unpublished Master's Thesis, 1951).

APPENDIX

APPENDIX A

A check mark " " shows you where to start. A double red line promotes you to the next higher level.

Speed and Comprehension Chart to Use with the Reader's Digest. Add a zero to the number correct you scored on your test. This is your per cent correct. Find this per cent on the chart and follow the line to the words-per-minute of your article. Place a dot on the chart. As you read at higher and higher speeds you gradually draw a line across the page to the higher rate lines. Be sure to show variations in your comprehension scores by moving up or down the chart.

Vocabulary in Context. When you take the comprehension test on the vocabulary exercises in the Reader's Digest, record the per cent correct in a box on the chart. The "% Correct" guide will help you find your score.

Reading for Meaning. Work on the color level indicated. Select the vocabulary to match the color and number you pick up from the "Reading for Meaning" exercises. Record the number of the exercise and the per cent correct in the first box on the chart. Example: 8-87 means "Exercise 8 at 87 % correct." Continue on this color until you are promoted. One line means that you take Vocabulary Test 1. Record score on the chart. If you pass the test, a double red line will promote you to the next higher color. Always a double red line means, "Go ahead to the next level." If you do not pass the vocabulary test you will continue on the same color until another red line appears. Then take the Vocabulary Test 2 to earn promotion.

Phrasing. Practice at color indicated on your chart. Try to finish each exercise in two minutes: one minute for the reading and one for the comprehension. At the end of ten exercises, take the test and record your score as per cent correct. Record it in the box by your color. A double red line will promote you.

Strang: Outlining. You and your working partner will rate your outlines. Record number of the exercise in the box by your rating. Your outline must contain all ideas in the proper places to be excellent; two errors in placement rates good; five errors of any kind rates fair; more than five errors is poor.

Maps, Charts, Graphs, and Time Tables. Begin at level indicated. Record score in fractions. For example, three correct out of five questions would read "3/5". Keep a record of exercises attempted.

Following Directions. Record number of the exercise opposite the color. Then chart per cent correct, using the kind of line that matches your color to connect your scores.

Word puzzles: Indicate number of the exercise and the time it takes to do it correctly.

Critical Thinking. Check the number of the exercise done opposite the correct color.

DIRECTIONS

The exercises in speeded comprehension of connected text give extensive practice in a variety of topics. If you read these selections as you customarily read, you may be sure that you will read no better when you finish. It is by forcing yourself to read faster with more and more concentration upon the content that you may expect to make substantial gains.

COMPREHENSION EXERCISES

Most of the passages in this section are accompanied by questions to test your comprehension. WRITE ALL ANSWERS ON A SEPARATE PIECE OF PAPER. DO NOT MARK IN THIS BOOK. The questions for some of the passages are of the multiple-choice kind, as illustrated in the following item:

- () 1. How did Caesar conduct himself on German soil?
- a. He acted in a friendly manner toward all German tribes.
 - b. He pursued the unfriendly tribes and defeated them in pitched battle.
 - c. He withdrew without a major battle.
 - d. He burned the villages and destroyed the crops of all the tribes.

In this kind of item you are to select the best answer and then write the letter which corresponds to that answer.

Other questions are of the true-false kind. The following is an example:

- () 1. The Negro has an advantage over the white man in the tropics even when both wear conventional European dress.

If in the terms of the article you decide that the statement is true, write the plus sign (+) in the space on your paper. If you decide that it is false, write the minus sign (-).

At the end of each article you will find a list of vocabulary words which have been selected to help you gain meaning from the article. Some of the words will not seem difficult, but may represent an unusual use of the word in the particular content. The paragraphs in each article are numbered; following each vocabulary item, the number of the paragraph in which it appeared is given in parentheses. Always refer to the word in its context before you select your answer from the choices given.

Check your answers by using the key that is provided. It is not expected that you will be able to answer all of the questions or exercises correctly. Good readers frequently fail to observe some clearly stated bit of information or fail to remember it after having observed it at the time. Answer the questions to the best of your ability. Do not, in any

case, look back to see what the correct answer is until you have marked all your answers for a given exercise.

Score your answers by consulting the key on the inside cover at the back of the folder. Record your score (in terms of percent correct, use per cent correct table) on the front cover of your folder.

Example: College Quad 75 85 90

KEEP A RECORD OF EACH EXERCISE THAT YOU COMPLETE SO THAT YOU WILL NOT DO THE SAME EXERCISE TWICE.

Test questions on "Here's How Inflation Has Victimized You," Reader's Digest, March 1959, pages 79-80. Write your answers on a separate paper.

1. Since 1939 the federal government has increased its spending 4 6 8
10 12 times.
2. Since 1939 our Social Security tax has gone up 5 10 20 30 times.
3. During the twenty years between 1939 and 1959 our cost of living has:
a. declined, b. doubled, c. more than doubled, d. tripled.
4. According to this article the primary cause of our inflation is:
a. taxes, b. the Marshal Plan, c. the "50 cent" dollar, d. wasteful spending.
5. Compared to 1939 our income taxes today have increased more than
7 14 21 28 times.
6. According to this article the author believes five of the following eight statements. Which five would you check?
 - a. Our taxes are too high.
 - b. Inflation will soon end.
 - c. More inflation is needed.
 - d. Bad depressions like the one of the 30's will never come again.
 - e. National expenditures must be reduced.
 - f. The people must demand a balanced budget.
 - g. Wasteful spending is morally wrong.
 - h. If we do not stop overspending we will have a depression.

PRETEST FOR SPEED AND COMPREHENSION

Reader's Digest, March 1959, pages 79 - 80 (425 words).

Timing:

| | |
|-----------------------------|----------------------------|
| 15 seconds - 1700 w.p.m. | 2 min-15 sec. - 189 w.p.m. |
| 30 seconds - 850 w.p.m. | 2 min-30 sec. - 170 w.p.m. |
| 45 seconds - 560 w.p.m. | 2 min-45 sec. - 156 w.p.m. |
| 1 min. - 425 w.p.m. | 3 minutes - 142 w.p.m. |
| 1 min. 15 sec. - 340 w.p.m. | 3 min-15 sec. - 131 w.p.m. |
| 1 min-30 sec - 283 w.p.m. | 3 min-30 sec. - 123 w.p.m. |
| 1 min-45 sec - 243 w.p.m. | 3 min-45 sec. - 111 w.p.m. |
| 2 minutes - 212 w.p.m. | 4 minutes - 106 w.p.m. |
| | 4 min-15 sec. - 100 w.p.m. |

Answers to Comprehension Test:

1. 8
2. 10
3. C
4. D
5. D
6. A; E; F; G; H;

(Number correct with a zero added gives the per cent correct. Record time in w.p.m. and the per cent comprehension on the chart)

USE OF THE PACED READING GUIDE

READ CAREFULLY

You are going to use the Reader's Digest to help you increase your speed of reading. Effective use of this material will depend on thorough understanding of the following system:

1. KNOW YOUR SPEED OF READING

2. In your folder--right hand side, second, third and fourth pages-- "Reader's Digest Guide."

- a. in the column marked "W. P. M." find your speed of reading.
- b. in the column marked "Magazine" note the issue of Reader's Digest you will use.
- c. in the column marked "Page" note the page on which the articles you will read begin.

example: Your reading speed is 375 W. P. M. You will get a copy of the March, 1959 issue. (All copies will be on a table clearly marked Reader's Digests.)

3. These magazines have been marked. Notice the red lines in the left margin of the column of print. These printed lines indicate the number of words between each set of lines.

example: For the March, 1959 issue, the article beginning on page 155 has been marked for 375 words per minute. There are 375 words between each set of lines.

4. You will listen for the Timer. When the bell rings you will begin to read. When the bell rings again you should have reached the first red mark. Try to read beyond the red mark before the bell rings. This is known as self-pacing. You are in competition with your own speed score.

5. When you have read the 5 articles marked for your present speed score you will take a special comprehension test on the 5th or final article. All the tests are in the box marked "Reader's Digest Comprehension Tests." The tests are in folders labeled according to "words per minute."

example: When you have read all 5 articles marked for 375 w.p.m., take the test from the folder labeled "375#."

Write your answers on a separate sheet of paper. The answers to

the test questions are in the digest. Check and score your answers, then record this score on the chart in your folder. (The chart at the top of the page.)

example: The answers to the test for 375 w.p.m. are found on page S-12, quiz #6 of the March, 1959 issue.

6. Special Instructions: Notice on page 2 of the Reader's Digest Guide, in the column labeled "magazine" the words "overtake two marks". This means that you must pass two red lines before the Timer rings.

PACED READING GUIDE

Four issues of Reader's Digests have been marked to aid you in developing your speed of reading. Each group of Words Per Minute (W.P.M.) has a test which you must pass with a grade of 80% or better before you can move on to the next higher speed. The last article listed under each group is the test article for that group. Any mimeographed tests or answers are filed in folders marked with the corresponding W.P.M. Those not mimeographed are in the center section of the magazines.

| W.P.M. | MAGAZINE | PAGE | TEST LOCATION | W.P.M. | MAGAZINE | PAGE | TEST LOCATION |
|--------|------------|------------------------------------|---|--------|------------|--------------------------------|---|
| 100 | April 1959 | 207 169 69 190 | Test Mimeographed Ans.-pg. S-4 quiz 1. | 275 | March 1959 | 69 113 101 225 238 | Test Mimeographed Ans.-pg. S-9 quiz 3. |
| 125 | April 1959 | 120 101 164 157 173 | Test Mimeographed Ans.-Pg. S-7 quiz 3. | 300 | March 1959 | 59 137 95 117 145 | Test Mimeographed Ans.-pg. S-5 quiz 1. |
| 150 | April 1959 | 138 227 181 105 198 | Test Mimeographed Ans.-pg. S-11 quiz 7. | 325 | March 1959 | 22 61 89 141 194 | Test Mimeographed Ans.-pg. S-10 quiz 4. |
| 175 | April 1959 | 57 83 37 50 111 | Test Mimeographed Ans.-pg. S-6 quiz 2. | 350 | March 1959 | 99 231 54 176 203 | Test Mimeographed Ans.-pg S-11 quiz 5 |
| 200 | April 1959 | 9 145 123 259 89 | Test Mimcoographed Ans.-pg. S-9 quiz 5. | 375 | March 1959 | 155 82 66 107 163 | Test mimeographed Ans.-pg S-12 quiz 6. |
| 225 | April 1959 | 47 75 115 64 214 79 | Test Mimeographed Ans.-pg. S-10 quiz 6. | 400 | June 1953 | 37 59 119 1 | Test 7-pg. 7-E Answers not given. |
| 250 | March 1959 | 212 75 37 217 184 | Test Mimeographed Ans.-pg. S-7 quiz 2. | 425 | June 1953 | 145 97 112 81 | Test 2-pg. 3-E Ans.-pg. 15-T |

| W.P.N. | MAGAZINE | PAGE | TEST LOCATION | W.P.N. | MAGAZINE | PAGE | TEST LOCATION |
|--------|---------------------|-------------------------------------|--|--------|-------------------------------|------------------------|---|
| 450 | April 1959 | 47 75 115 | Test Mimeo- graphed Ans.-pg. 8-10 quiz 6. | 625 | June 1953 | 41 137 107 29 | Test 5-pg. 5-E Ans.-pg. 15-T |
| | Overtake 2 marks | 64 214 79 | | | | | |
| 475 | June 1953 | 67 8 47 100 | Test 1-pg. 2-F Ans.-pg. 15-T | 650 | March 1959 | 22 61 89 | Test mimeo- graphed Ans.-pg. 5-10 quiz 4 |
| | Overtake 2 marks | 141 194 | | | | | |
| 500 | March 1959 | 212 75 37 | Test Mimeo- graphed Ans.-pg. 8-7 quiz 2. | 675 | June 1953 | 55 92 25 78 | Test 9-pg. 7-E Ans.-pg. 16-T |
| | Overtake 2 marks | 217 184 | | | | | |
| 525 | June 1953 | 125 63 132 17 103 85 | Test 9-pg. 8-E covers articles 17 and 103 Ans.-pg. 16-T ***** Test 6-pg. 6-E Ans.-pg. 15-T | 700 | March 1959 | 99 231 54 | Test mimeo- graphed Ans.-pg. 8-11 quiz 6 |
| | Overtake 2 marks | 176 203 | | | | | |
| 550 | March 1959 | 69 113 101 | Test mimeo- graphed Ans.-pg. 5-9 quiz 3. | 725 | November 1959 March-'59 | 159 69 | Test Mimeo- graphed Ans.-pg. 5-9 quiz 3 |
| | Overtake 2 marks | 225 238 | | | | 101 238 | |
| 575 | June 1953 | 127 114 5 121 | Test 4-pg. 4-F Ans.-pg. 15-T | 750 | March 1959 | 155 82 66 | Test mimeo- graphed Ans.-pg. 8-12 quiz 6 |
| | Overtake 2 marks | 107 163 | | | | 107 163 | |
| 600 | March 1959 | 137 69 95 | Test mimeo- graphed Ans.-pg. 8-8 quiz 1. | 775 | November 1959 | 61 71 48 | Quiz 4-pg. 3- Ans. in artic |
| | Overtake 2 marks | 117 145 | | 800 | June 1953 | 37 69 | Test 7-pg. 7. No answers |
| | | | | | Overtake 2 marks | 1 | |

| W.P.M. | MAGAZINE | PAGE | TEST LOCATION | W.P.M. | MAGAZINE | PAGE | TEST LOCATION |
|--------|-------------------------------------|--------------------------|---|--------|-------------------------------------|-------------------------|---|
| 825 | November 1959 | 96 61 122 | Quiz 1- Page S-4 Ans.-mimeo- graphed | 925 | November 1959 | 129 209 67 219 | Quiz 2 pg. S-5 Ans. mimeo- graphed |
| 850 | November 1959 | 125 | | 950 | November 1959 | 71 | |
| | June 1953 Overtake 2 marks | 145 81 | Test 2-pg. 3-E Ans.-pg. 15-T | | June 1953 Overtake 2 marks | 8 47 100 | Test 1-pg. 2-E Ans.-pg. 15-T |
| 875 | November 1959 | 76 198 233 148 | Quiz 7 pg. S-10 Ans. mimeo- graphed | 975 | November 1959 | 180 83 190 101 | Quiz 6 pg. S-9 Ans. mimeo- graphed |
| 900 | November 1959 | 214 165 153 176 | Quiz 3 pg. S-6 Ans. mimeo- graphed | 1000 | November 1959 | 37 116 57 | Quiz 5 pg. S-8 Ans. mimeo- graphed |

MAIN IDEAS IN PARAGRAPHS

DIRECTIONS

There are three types of exercises for you to use to learn to find main ideas in paragraphs accurately and quickly. Look below for the specific directions for each type of exercise. Keep a record of your accuracy.

I. Choosing Main Ideas - Multiple Choices

There are two paragraphs on each pink card. The cards are numbered CI (central idea) through CI 9 - 20. Read each paragraph separately and then turn the card over to the four main idea choices. Choose the one main idea you think best summarizes the paragraph you have just read. Write the number of the answer on a separate sheet of paper. You will be given one minute to read each paragraph and choose the best main idea. This is ample time - do it in less if you can. The answers are given at the end of these directions.

II. Choosing Main Ideas by Asking Good Questions

There are two paragraphs on each pink card. The cards are numbered QI - 2 through QI 5 - 16. Read each paragraph separately trying to discover the main idea presented. Then turn the card over. From the four multiple choice questions choose the question whose answer would give you the best main idea of the paragraph. On a separate sheet of paper write the number of the best question. You will be given one minute to read the paragraph and choose the best question. You will be given one minute to read the paragraph and choose the best question - do it in less time if you can. The answers are given at the end of these directions.

III. Choosing Main Ideas by Yourself

On each green card you will find two paragraphs. They are numbered CI - 2 through CI 5 - 16. You will be given one minute to read each paragraph and write the main idea in your own words. Use just one sentence. Do it in less time if you can. When you are through, you can check your main idea with a friend and discuss the merits of your decisions. There is no answer key for this exercise.

APPENDIX B

MAPS, CHARTS, AND GRAPHS

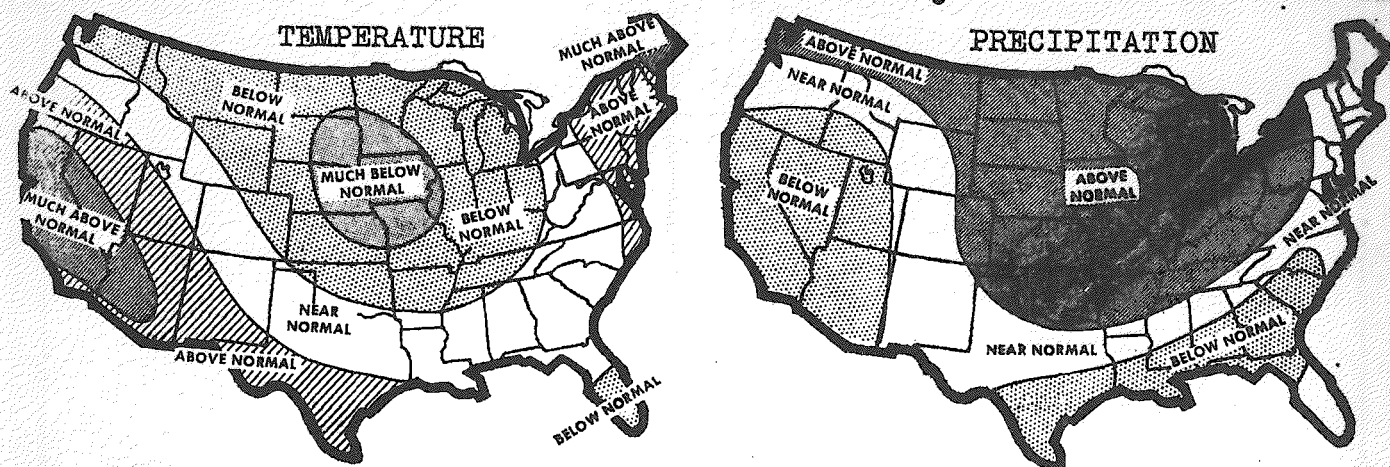
Toiletry Sales At Manufacturers' Level ... 1958 Vs 1954

| Product | 1954 | Change | 1958 | Product | 1954 | Change | 1958 |
|---|---------|--------|---------|-------------------------------|---------|--------|---------|
| Cosmetics, Makeup | | | | Oral Hygiene | | | |
| Lipstick | 23,711 | -87.4 | 44,432 | Toothpaste | 110,825 | +11.4 | 156,712 |
| Rouge | 2,056 | +129.0 | 4,709 | Toothpowder | 4,854 | -14.8 | 4,135 |
| Face powder | 21,844 | -62.6 | 35,508 | Denture cleaner | 5,384 | +16.2 | 6,257 |
| loose | 13,205 | -67.7 | 22,139 | Mouthwashes | 6,177 | +255.2 | 21,941 |
| liquid & wet | 8,639 | +54.8 | 13,369 | Other dentifrices | 3,549 | +148.2 | 8,805 |
| Face creams | 42,150 | +55.0 | 65,326 | | 130,789 | +51.3 | 197,851 |
| moisturizing | 16,305 | +48.5 | 24,211 | Shaving Products | | | |
| foundation | 6,273 | +8.9 | 6,829 | Brushless, tube & jar | 8,249 | -26.0 | 6,108 |
| lubricating | 8,158 | +143.2 | 19,789 | Lather, tube & jar | 6,799 | -24.6 | 5,129 |
| oil & creams | 11,431 | +26.3 | 14,497 | Aerosol | 17,732 | +23.9 | 17,880 |
| Perfumes | 26,875 | +58.7 | 42,653 | Other shave preps | | | 1,097 |
| oil mixtures | 13,764 | +78.5 | 24,572 | Stick, powder, cake | 2,916 | +22.1 | 3,560 |
| liquid & solid | 13,111 | +37.9 | 18,081 | Aftershave lotion | 19,524 | +42.6 | 27,836 |
| Toilet waters | 47,299 | +21.2 | 57,320 | | 55,220 | +17.0 | 64,610 |
| liquid | 39,725 | +39.7 | 55,511 | Manicure Items | | | |
| solid | 7,574 | -76.1 | 1,809 | Nail polish | 9,146 | | |
| Other fragrances | 2,867 | +3.8 | 2,975 | Polish removers | 3,241 | +42.2 | 18,521 |
| Mascara, eye shadow | 1,440 | +610.8 | 10,235 | Other preps | 638 | | |
| | 168,242 | +56.4 | 263,158 | | 13,025 | | |
| Hair Preps | | | | Other Toiletries | | | |
| Shampoo, with soap | 20,628 | +87.3 | 38,732 | Talcum, toilet water | 27,957 | +60.3 | 44,806 |
| Shampoo, soapless | 57,903 | -0.9 | 57,378 | Bath salts, oils, bubble bath | 5,609 | +114.5 | 12,032 |
| Hair tonics | 19,632 | +16.4 | 22,856 | Suntan products | 1,561 | +415.5 | 8,515 |
| Dressing, brilliantine | 20,342 | +97.1 | 40,100 | Hand lotions | 22,081 | +66.8 | 36,325 |
| Permanent wave solutions, heat setting | 1,413 | -60.6 | 557 | Baby oils | 6,434 | +6.0 | 6,821 |
| Permanent cold waves | 60,629 | +0.1 | 60,692 | Cleansing lotions | 12,135 | +92.0 | 12,609 |
| home wave kits | 14,487 | +194.9 | 42,724 | Other lotions | | | 10,687 |
| home refills | 35,043 | -97.2 | 968 | Deodorants, total | 35,141 | +56.0 | 54,809 |
| commercial | 11,099 | +53.2 | 17,000 | liquid | 13,457 | -73.4 | 23,332 |
| Dyes, rinses, tints | 14,112 | +127.9 | 32,162 | cream | 18,510 | -18.1 | 15,165 |
| Wave set preps | 11,563 | +201.3 | 34,845 | powder & stick | 3,174 | +413.9 | 16,312 |
| Other hair preps | 14,200 | +128.2 | 32,403 | Depilatories | 2,964 | -29.1 | 2,102 |
| | 220,422 | +45.1 | 319,725 | Foot, other powders | 5,866 | +194.9 | 17,296 |
| | | | | All others | 21,235 | +129.3 | 48,965 |
| | | | | | 140,983 | +81.0 | 255,489 |

1. What were the total perfume sales in 1954? How did 1958 compare with the previous figures?
2. What type of products showed the greatest rise in sales?
3. How do you interpret the figures in columns 1954 and 1958?
4. What general assumption or conclusion could you reach about toiletry growth from 1954 to 1958?

MAPS, CHARTS, AND GRAPHS

WEATHER OUTLOOK Mid-June to Mid-July -----



COOL, DAMP. Temperatures below normal, rainfall above normal over much of the U.S.--so indicate these maps based on the U.S. Weather Bureau's outlook.

16

U. S. NEWS & WORLD REPORT, June 27, 1960

Weather Outlook

1. In what section of the country would the best combination of rainfall and temperature likely appear in Mid-July?
2. In what section of the country would it probably be hot and dry?
3. What types of sporting activities could you plan for mid-June if you were a "Bay-Statesman"?
4. How would the delegates to the Democratic Convention find the weather and precipitation? If a Massachusetts delegate were planning his wardrobe, what type of clothes should he pack?

PHRASING TEST

Do you phrase properly when you read so that ideas come off the page quickly and clearly? Try this short test and see if you need help with better phrasing.

When Henry stepped into that row of sweet peas, he found himself in a row with his friend Charles. After a thorough but rapid scrutiny of each other, the two boys started to speak at the same minute. Charles shouted that every time he began to sow his garden, the sow that belonged to Henry would dig up his seeds. Henry replied that he would refuse to tie up the animal until Charles cleared up the refuse in his yard. Then they both lost their tempers. "I'll take a punch at you," Charles cried, "if you do not go back into your house, close the door, and stick close to your own place." There were tears in Henry's eyes, but he sailed into the fight, and pretty soon there were tears in his clothes.

5. How did Henry respond to Charles' warning?
4. What was Charles' alternative?
3. When would Henry tie up his animal?
2. What happened to Charles' seeds?
1. Where did Henry have a quarrel with Charles?

of paper.
 Comprehension test: Write your answers to the following questions on a piece

FOLLOWING DIRECTIONS

No. 1

Follow these directions carefully and you'll find the name of a place you wouldn't care to drop into.

1. Write the letters of the words, "Can anybody give me directions."
2. Drop all I's.
3. Any time you see two consonants together reverse their order (count Y as a consonant).
4. Drop every fourth letter.
5. Put the first five letters at the end and drop the S.
6. Drop B's and E's.
7. Remove the word which means "2,000 lbs."
8. Change the M to R and drop the first D.
9. Drop the first Y and interchange the last two letters.
10. Add AN before D and add O between the last two letters.

No. 2

Work carefully and you'll find out the name of a fruit.

1. Write the letters of the words, "All men are created equal."
2. Take out all E's.
3. Remove the first R.
4. Drop any double letters.
5. Every time three consonants appear together reverse their order.
6. Drop the first and last letters and move the T to the end.
7. Remove the first two letters.
8. Drop the Q and change the third letter from the end to C.
9. Change the second vowel to I and the last vowel to O.
10. Drop the third consonant and replace C with P.

No. 3

If you can do this correctly you will find the name of the place where happiness is always found.

1. Write down the letters of the words, "Place happiness is found."
2. Take out all E's.
3. Wherever a double consonant appears take out both letters.
4. Drop the first three letters.
5. Move the A and place it before the final letter.
6. Remove the two letters in the middle.
7. Move the first I to the beginning.
8. Where three vowels appear together change them in order that the first vowel in the group becomes the second, the one in the second place becomes the third, and the last becomes the first.
9. Move the last letter to the beginning and change the H to T.
10. Drop the two middle letters, and then add RY at the end.

No. 4

Do this carefully and you'll come out with the name of a very old institution.

1. Write down the letters of the words "Men and women study here."
2. Every time you see three consonants together put the first in third place, the second in first place and third in second place. (Count Y as a consonant.)
3. Remove all U's and E's.
4. Change O to I and reverse the order of the last four letters.
5. Remove the first letter and DH.
6. Change M to I and the last N to A.
7. Reverse the first two letters and put double L's between the double letters.
8. Change S to A and T to M.
9. Double the M's and drop the second N.
10. Rearrange the words you now have and you will have the answer.

No. 5

If you follow these directions carefully you'll have the name of a tragic hero of a French play.

1. Write the letters of "I speak in beautiful verse."
2. Remove all the I's and the R.
3. Remove every letter whose position in the alphabet is beyond T and drop the first letter.
4. Drop the middle three letters.
5. Put O's in place of E's.
6. Change the K to R and remove the first letter.
7. Remove the three-lettered girl's nickname.
8. Put A between the middle two letters.
9. Drop the first two vowels.
10. Remove the S and put CY at the beginning and you have it!

No. 6

Do this exactly and you'll find out the name of a popular singer.

1. Write the letters of the words, "Radio and television singer."
2. Every time two consonants appear together reverse their order.
3. Drop every fifth letter.
4. Drop the first letter and one of the double letters.
5. Remove the middle four letters.
6. Reverse every two letters.
7. Drop any double letters.
8. Reverse the third and fourth letters and drop the one letter with a tail below the line.
9. Change the third N to O and remove the middle letter.
10. Remove the DN and put A in place of those letters.
11. Put H before and after the S and you'll have the name of this singer.

No. 7

Follow these directions and you'll find the name of an old-fashioned vehicle.

1. Write the letters of the words, "People used to ride in these."
2. Dropp all E's.
3. Every time you see three consonants in a row put the first in second place, the second in third place and the third in first place.
4. Drop the middle three letters.
5. Interchange the first and fifth letters.
6. Remove all S's.
7. Change the P's to G's.
8. Interchange the first two letters.
9. Remove all consonants but the G's and the Y add at the end.
10. Reverse the order of the last three letters.
11. Drop the last two letters and change Q to B.

No. 8

Don't make any mistakes and you'll have the name of a foreign car.

1. Write the letters of "Let us go for a ride in one."
2. Drop all O's.
3. Put the first three letters at the end and drop the letter with the tail below the line.
4. Drop every fourth letter.
5. Take out the last three vowels.
6. Move the third, fourth and fifth letters to the beginning.
7. Interchange every two letters.
8. Remove all consonants beside F.
9. Interchange the third and fourth letters.
10. Drop the U and put the A in its place.
11. Change the E to the first letter of the word which stands for "2,000 pounds."

No. 9

If you do this exercise correctly you'll find out something everybody likes to receive.

1. Write the letters of the words, "Everybody likes to receive."
2. Drop every fourth letter.
3. Remove the last four letters.
4. Move the two vowels which are together to the beginning.
5. Remove the word which is the opposite of "girl".
6. Interchange every two letters.
7. Change the R to A and drop all E's.
8. Interchange the first and last letters.
9. Drop the middle letter and put M in its place.
10. Put the middle letter at the beginning and drop the letter with the tail.
11. Drop the second and third letters and move the new second letter to the end.

No. 10

Do this and you'll find out the name of a fruit which is called "rheum raphonticum" in Latin and which makes milk taste terrible if you eat it before drinking the milk.

1. Write the letters of the words, "Do not eat this before milk."
2. Drop any double letters.
3. Drop the word which is the opposite of "her".
4. Reverse the middle three letters.
5. Remove all E's.
6. Change the K to H and the 1st O to A.
7. Remove all O's and A's.
8. Reverse the last six letters.
9. Change M to A and drop the first three letters.
10. Change L to U and drop the F.
11. Put R at the beginning and change I to B.

No. 11

Work carefully and you'll discover the name of the most densely populated country in the world.

1. Write the letters of the words, "Most densely populated country."
2. Drop all E's, S's, and T's.
3. Remove the word which is a nickname for "father" and the word which means "boy".
4. Move the third letter to the end.
5. Drop every sixth letter.
6. Change the last O to A.
7. Reverse every two letters.
8. Remove the M and the R.
9. Remove the middle three letters.
10. Reverse the second and third letters.
11. Double the L.
12. Drop the first N and add H to the beginning.
13. Now you have it.

No. 12

You will soon discover a situation no one wants to be in which is also the name of a nationality.

1. Write the letters of the words, "No one likes this situation."
2. Drop all double letters (if after doing this any new double letters appear, leave them as they are.)
3. Everytime two vowels appear together reverse their order.
4. Drop the four letter word you can easily see.
5. Move the H to end end and drop the second set of double letters.
6. Drop all vowels.
7. Remove the two T's.
8. Put a C at the end.

No. 12 con't.

9. Remove the S and Put U in its place.
10. Reverse the last two letters.
11. Drop the first two letters.
12. Remove the N and put D at the beginning.

No. 13

If you do this carefully you'll discover a place where times have changed.

1. Write the letters of the words, "A place where times have changed."
2. Drop all A's.
3. Every time three consonants appear together reverse their order.
4. Remove all E's except the first two E's.
5. Drop the first three and last three letters.
6. Remove the boy's nickname in the middle.
7. Drop the first letter and move the R to the beginning.
8. Take away all H's but the last one.
9. Change the middle letter to N.
10. Double the vowel.
11. Change S to WI.
12. Remove the first W and put G at the beginning.

No. 14

Do this carefully and you'll discover Einstein's middle name.

1. Write the letters of the words, "A very great physicist."
2. Reverse every two letters.
3. Drop all I's.
4. Put O in place of the middle letter.

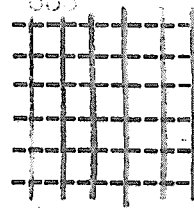
No. 14 con't.

5. Remove the first two letters and the last two letters.
6. Change all R's to H's.
7. Put a D in place of C and remove the second consonant.
8. Put the second vowel at the end.
9. Change any P's and S's to N's.
10. Remove the two letters with tails and move the D to after the A.
11. Move the O to between the double letters.
12. Drop the third H and if you look carefully you'll see the answer.

No. 15

1. The following figure is a sign hobo's use to tell other hobo's what they have found out about the surroundings. Work this out and you'll discover what this sign means.

1. Write the letters of the words, "This is a place hobo's like."
2. Drop all H's.
3. Move one L to the beginning and the other L to the end.
4. Remove all I's but the last one.
5. Drop the middle four letters and the O to the right of them.
6. Drop K and put the final L in its place.
7. Change the first S to C and drop the other S's.
8. Move the C to the beginning.
9. Interchange the second and third vowels.
10. Drop the T and move the first E to take its place.
11. Change P to N.
12. Remove the final E and put J before the third vowel and you have it.



No. 16

If you follow these directions precisely, you will transform the title of a Reader's Digest article into a slogan which might have inspired its author.

1. Write the letters of the title Our Most Dangerous Lobby.
2. Change the second and the last letters to W's and place the second W before the second D.
3. If there is no C in the line, insert one before the last R and strike out the first R.
4. If there is an even number of letters, strike out the third O.
5. Place the seventh letter last, the eighth letter first.
6. If any letter is doubled, strike out the second of the pair and place the other before the first E.
7. If the combination CR appears, place it before the last O.
8. Change the second O to I and the third o to A.
9. If the number of letters is even, insert a U after the B and place the next three letters after the L.
10. If any combination of letters forms a verb in the past tense, place the first letter of the verb at the end and change the second letter of the verb to T.
11. If there are two O's in the line, insert the H before the N and strike out the L.
12. If the combination NG occurs, strike it out and change the last O to A.
13. Change the M to N and first S to R.

No. 17

If you do this correctly, you will change the name of an American document into the name of an internationally known man.

1. Write down the words, "Emancipation Proclamation."
2. Take out the three one-syllable words which name people (not proper names.)
3. Take out all the I's.
4. Counting only the remaining letters, add an L after each fifth letter.

No. 17 con't.

5. Move the first L to the beginning and put the last letter in its place.
6. Beginning with the third letter from the left, interchange each two letters.
7. Whenever three consonants occur together, change them in order so that the first consonant in the group becomes the second, the one in second place becomes the third, and the one in third place becomes the first.
8. Take out the last three vowels.
9. Double all T's.
10. Move the OC's to the end of the line.
11. Whenever a double consonant appears, take out both letters.
12. Drop the last two letters.
13. Change the E's to I's and the P's to L's.

No. 18

Do this correctly and you'll discover which kind of a bird an "apteryx" is.

1. Write the letters of "Apteryx is a kind of bird."
2. Drop all vowels other than I's (including Y).
3. Reverse the order of every three letters.
4. Drop any double letters.
5. Remove the middle three letters.
6. Interchange the first five letters with the last five letters.
7. Whenever you see four consonants together put the first in third place, the second in first place, the third in fourth place and the fourth in second place.
8. Drop the consonants in the three letter word you see near the middle.
9. Remove the first two letters and put W in their place.
10. Drop the last consonant.

No. 18 con't.

11. Interchange every two letters.
12. Move the second letter to between the double letters.
13. Drop the second and last letters.

No. 19

If you do this correctly you will change the name of Benjamin Franklin to a place he never visited.

1. Write down the letters of the words, "Benjamin Franklin."
2. Drop all E's.
3. Whenever three consonants occur together change them so that the first consonant becomes the last, the second becomes the first, and the third becomes the middle consonant.
4. Add A after every fifth letter.
5. Change any P's to C's.
6. Remove any double letters.
7. Take out the first two and the last two consonants.
8. Drop the second consonant and move the R to its place.
9. Drop the K.
10. Move the final letter to the beginning and drop the L.
11. Remove the last two consonants.
12. Drop the I and put the other before the new last letter.
13. Interchange the second and fourth letters.

No. 20

Do this carefully and you'll find the name of a bird which is now extinct, but was related to pigeons. They used to live on Mauritius, an island in the Indian Ocean.

1. Write the letters of the words, "used to live on Mauritius."
2. Drop all I's.
3. Reverse the order of every three letters.

No. 20 con't.

4. Remove every third letter.
5. If you see any letters next to each other which are next to each other in the alphabet, remove them.
6. Reverse the letters so that the last five letters become the first five letters.
7. Remove all U's.
8. Put D's after every E.
9. Interchange every two letters.
10. Drop the first two letters.
11. Put the first D at the beginning.
12. Change the first E to Q and drop the S's.
13. Drop the T and E and move the final D to T's former place.

DEVELOPMENT OF MEANING VOCABULARY

The key words, synonyms, and antonyms used as part of the development of meaning vocabulary in this study are listed in the following pages by units and levels along with the tests and test keys for each level.

The number of practices for these words in addition to their uses in other reading skills developed in this study are as follows:

| Number of Practices | Number of Words |
|---------------------|-----------------|
| 22 | 1 |
| 19 | 1 |
| 13 | 1 |
| 12 | 1 |
| 11 | 1 |
| 10 | 2 |
| 9 | 1 |
| 8 | 6 |
| 7 | 5 |
| 6 | 20 |
| 5 | 45 |
| 4 | 114 |
| 3 | 185 |
| 2 | 424 |
| 1 | 2371 |

LEVEL 6

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| begged | asked for | given |
| ailed | caused illness | cured |
| discovered | found out | concealed |
| behaved | acted | |
| contain | include | exclude |
| obliged | required | volunteered |
| patients | sick people | doctor |
| remove | take away | replace |
| similar | alike | different |
| experiment | test | prove |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| buds | blossoms | withers |
| jar | container | |
| later | in the future | sooner |
| plant | a living thing | animal |
| shoot | part of a plant | |
| store | collect | distribute |
| vegetables | food of plants | |
| soil | dirt | |
| moist | damp | dry |
| contain | hold | |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| trained | taught | unskilled |
| landed | arrived | sailed |
| studied | learned | |
| tour | journey | |
| famous | prominent | unknown |
| charmed | pleasant | displeased |
| nightingale | sweet singing bird | |
| agreed | consented | refused |
| director | leader | follower |
| supplied | provided | |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| bag | paper container | |
| carries | transports | |
| going | leaving | returning |
| high | far up | low |
| land | come to stop | take off |
| line | route | |
| poles | slender sticks | |
| rope | thick cord | |
| wings | flies | |
| hums | murmurs | |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| several | some | few |
| sink | descend | rise |
| hitched | fastened | untied |
| grunts | hoarse sounds | |
| sense | judgment | foolishness |
| kneel | bend the knees | |
| woven | made into cloth | raveled |
| nasty | disagreeable | pleasant |
| temper | disposition | |
| caravan | desert train | |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| cause | source | effect |
| succeeded | solved the problem | failed |
| indoors | inside | |
| trouble | misery | happiness |
| sprayed | scattered liquid | |
| linings | inner layers | |
| cure | heal | |
| serious | intense | |
| result | effect | cause |
| likely | to be expected | unlikely |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| chief | principal | |
| different | unlike | same |
| fine | excellent | poor |
| fresh | unsalted | salty |
| fronts | faces | rears |
| freight | cargo | |
| pleasure | happiness | sadness |
| fortunately | luckily | |
| unload | remove cargo | pack |
| nowadays | today | formerly |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| bagged | killed by hunter | |
| flagged | signalled | |
| freezing | becoming cold | roasting |
| party | group of people | |
| brains | wisdom | stupidity |
| spun | turned | |
| hollowed | with the inside gone | |
| memories | things remembered | |
| withering | disapproving | growing |
| guide | leader | follower |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| busy | active | resting |
| close by | near by | far away |
| idea | scheme | |
| leads | shows the way | follows |
| shop | a store | |
| takes care of | manages | |
| time | period | |
| town | community | village |
| wishes | desires | |
| holiday | celebration | |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| started | set in motion | stopped |
| teams | pairs | |
| canvas | strong cotton cloth | |
| scouts | look-outs | |
| site | place to build | |
| split | divided | unbroken |
| cattle | livestock | |
| arranged | placed | |
| drawn | pulled along | pushed |
| prairie | grassland | hill |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| barefooted | without shoes | |
| bear | produce | wither |
| low | scarce | plenty |
| brush | branches | |
| matter | affair | |
| opened | settled | deserted |
| poor | needy | rich |
| pressed | forced | |
| welcomed | greeted kindly | rejected |
| century | one hundred years | |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| mistake | error | |
| form | take shape | |
| loose | not held fast | tight |
| dental | pertaining to teeth | |
| important | essential | unnecessary |
| usually | generally | not often |
| special | particular | ordinary |
| prevent | ward off | cause |
| depends | relies on | |
| permanent | lasting | temporary |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| country | rural district | city |
| fall | autumn | spring |
| accident | unplanned event | |
| plump | rounded out | slim |
| remain | wait | leave |
| relation | connected by birth | |
| seldom | rarely | often |
| appearance | coming into view | disappearance |
| harmful | causing damage | helpful |
| predicted | told beforehand | |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| courses | routes | |
| join | unite | separate |
| settled | colonized | |
| exchanged | traded | |
| meant | intended | |
| crops | products | |
| arrange | plan | disturb |
| pioneers | first settlers | |
| secured | acquired | |
| beginnings | origins | endings |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| greatly | very much | hardly |
| plant | set into ground | harvest |
| crops | products | |
| usually | ordinarily | seldom |
| harvest | reap | sow |
| region | area | |
| various | different | same |
| affects | influences | |
| continual | perpetual | stopping |
| likewise | moreover | |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| melt | dissolve | freeze |
| cheaper | costing less | more expensive |
| accident | chance | expectation |
| steady | constant | irregular |
| natural | produced by nature | artificial |
| greasy | oily | |
| shallow | having little depth | deep |
| invented | originated | copied |
| finally | lastly | originally |
| harden | become solid | soften |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| ground | crushed | |
| market | store | |
| packing | putting into package | unpacking |
| pressed | squeezed out | |
| uses | puts into service | |
| meal | powder from grain | |
| stock | animals | |
| root | dig with snout | |
| sorted | separated | bundled |
| result | consequence | cause |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------------|----------------|
| calling | naming | |
| likable | having friendly qualities | disliked |
| language | human speech | |
| scale | series of steps | |
| graceful | beautiful in movement | clumsy |
| tangled | twisted | |
| received | obtained | gave |
| exactly | precisely | incorrectly |
| imagine | think of | see |
| mystery | something unexplained | fact |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| cuts | pieces of meat | |
| first | originally | last |
| fresh | unspoiled | decayed |
| kept | preserved | spoiled |
| sides | parts of animals | |
| tried | attempted | failed |
| famous | celebrated | unknown |
| flavor | taste | |
| method | system | |
| recently | lately | formerly |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| nuts | seeds with shells | |
| formed | established | unformed |
| allowed | permitted | forbidden |
| search | hunt | |
| bury | put in ground | dig up |
| surface | outside | interior |
| purposes | aims | results |
| successfully | fortunately | unhappily |
| fertile | fruitful | barren |
| partnership | combination | |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| low | flat | high |
| flow | run | stop |
| articles | products | |
| collect | gather | scatter |
| huge | enormous | tiny |
| level | even | uneven |
| paved | smooth | rough |
| travel | journey | |
| interesting | holding the attention | boring |
| canals | man made ditches | |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------------|----------------|
| care | protection | neglect |
| loose | free | imprisoned |
| pretty | quite | |
| national | belonging to the nation | |
| role | course of action | |
| smack | noise of the mouth | |
| stare | long look | glance |
| protecting | guarding | neglecting |
| resources | given by nature | |
| headquarters | main office | |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| warm | affectionate | cool |
| share | enjoy together | keep to self |
| custom | long practice | |
| interest | wanting to know | |
| respects | esteems | dishonors |
| acquire | gain | lose |
| develop | build | destroy |
| enduring | permanent | temporary |
| intelligence | ability to learn | stupidity |
| opportunities | chances | |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| banked | piled up | flattened |
| dark | nightfall | dawn |
| simple | easy | complicated |
| standard | usual | uncommon |
| tend | care for | neglect |
| slabs | flat pieces | |
| ledge | narrow shelf | |
| blunder | mistake | |
| basis | foundation | |
| framework | shape | |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| reason | cause | effect |
| chimney | smoke stack | |
| steam | water vapor | |
| spins | whirls | |
| escapes | gets free | is caught |
| sorted | separated | gathered |
| supply | provide | |
| plentiful | abundant | scarce |
| especially | chiefly | |
| experimenting | making tests | proving |

READING FOR MEANING - LEVEL 6Test 1

Copy the following pairs of words on your paper.
If the paired words are synonyms write S between
the words. If they are antonyms write A.

1. depend.....rely
2. obliged.....required
3. acquire.....lose
4. permanent.....temporary
5. similar.....alike
6. steady.....irregular
7. harvest.....sow
8. serious.....intense
9. natural.....artificial
10. important.....essential
11. usually.....generally
12. collect.....scatter
13. level.....uneven
14. interesting.....boring
15. seldom.....rarely
16. care.....neglect
17. respects.....dishonors
18. continual.....perpetual
19. recently.....formerly
20. sorted.....separated

READING FOR MEANING - LEVEL 6Test 2

Copy the following pairs of words on your paper.
If the paired words are synonyms write S between
the words. If they are antonyms write A.

1. melt.....dissolve
2. result.....effect
3. prevent.....cause
4. experiment.....test
5. exchanged.....traded
6. fertile.....barren
7. shallow.....deep
8. natural.....artificial
9. famous.....prominent
10. succeeded.....failed
11. special.....particular
12. various.....different
13. intelligence.....ability
14. withering.....growing
15. enduring.....temporary
16. opportunities.....chances
17. surface.....interior
18. plentiful.....scarce
19. invented.....originated
20. plant.....harvest

READING FOR MEANING - LEVEL 6

| <u>Key - Test 1</u> | | <u>Key - Test 2</u> | |
|---------------------|---|---------------------|---|
| 1. | S | 1. | S |
| 2. | S | 2. | S |
| 3. | A | 3. | A |
| 4. | A | 4. | S |
| 5. | S | 5. | S |
| 6. | A | 6. | A |
| 7. | A | 7. | A |
| 8. | S | 8. | A |
| 9. | A | 9. | S |
| 10. | S | 10. | A |
| 11. | S | 11. | S |
| 12. | A | 12. | S |
| 13. | A | 13. | S |
| 14. | A | 14. | A |
| 15. | S | 15. | A |
| 16. | A | 16. | S |
| 17. | A | 17. | A |
| 18. | S | 18. | A |
| 19. | A | 19. | S |
| 20. | S | 20. | A |

LEVEL 7

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| fortunate | avored by fortune | unlucky |
| located | placed | |
| quarrel | dispute | agreement |
| quantities | amounts | |
| unemployment | lack of work | |
| suited | adapted | |
| agriculture | farming | |
| excellent | the best | poor |
| contented | pleased | dissatisfied |
| serious | grave | frivolous |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| boot | a high shoe | |
| enough | sufficient | inadequate |
| sailed | traveled by boat | |
| bridges | structures over water | |
| avenue | a wide street | alley |
| paved | smooth surfaced | rough |
| cabin | small room on a boat | |
| rows | moves with oars | |
| canal | man made ditch | |
| crossing | intersection | |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| living | existing | dying |
| shipped | transported | |
| goods | products | raw materials |
| trading | exchanging | |
| merchants | salesmen | customers |
| refused | declined | accepted |
| hands | hired workers | employers |
| skillful | expert | untrained |
| cost | price | |
| ruined | destroyed | restored |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| transportation | carrying goods | |
| highways | wide avenues | |
| airplanes | air machines | |
| generally | usually | seldom |
| telegram | message sent by wire | |
| factories | manufacturing plants | |
| radiogram | message sent by radio | |
| commerce | trade | |
| storekeeper | owner of store | |
| goods | merchandise | |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| wilderness | uninhabited place | clearing |
| missionaries | religious teachers | |
| starvation | lack of food | fullness |
| reported | made known | unannounced |
| loaded | piled | unpacked |
| rushed | hurried | tarried |
| sickness | illness | health |
| thirst | lack of liquid | |
| reserved | set apart | |
| built | erected | wrecked |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| depends | leans upon | stands alone |
| structure | frame | |
| for example | for instance | |
| chasers | hunters | prey |
| captures | imprisons | frees |
| powerful | strong | weak |
| seize | grab | release |
| particles | pieces | wholes |
| firmly | tightly | loosely |
| chisels | gouges out | |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| clearings | open spaces | forests |
| reach | arrive | leave |
| on foot | walking | riding |
| protect | guard | neglect |
| consist | made up of | |
| trails | routes | |
| hunting | seeking | finding |
| belongings | possessions | |
| companies | groups | individuals |
| ahead | before | behind |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| frame | support | |
| carpenters | builders with wood | |
| fastened | attached | loosened |
| stern | rear | bow |
| apart | separate | together |
| opposite | entirely different | same |
| shaped | formed | unformed |
| cargo | freight | |
| decks | floors on boat | |
| leaking | filling with water | draining |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| heavier | weighing more | lighter |
| weather | condition of atmosphere | |
| tunnel | passageway | |
| crawl | more slowly | run |
| dens | animal houses | |
| travel | journey | |
| during | in the time of | |
| insects | bugs | |
| rocky | stony | smooth |
| storeroom | place to keep things | |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| found | discovered | lost |
| patrol | watch | |
| useful | practical | worthless |
| common | ordinary | unusual |
| continue | keep on | stop |
| destroyed | ruined | preserved |
| refuse | rubbish | |
| certain | definite | unsure |
| enormous | huge | tiny |
| attractive | delightful | unpleasing |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| chains | links | |
| form | make up | |
| forces | causes of change | |
| periods | intervals | |
| masses | huge amounts | |
| difficult | hard | easy |
| combinations | mixtures | elements |
| exposed | uncovered | concealed |
| formation | shape | |
| lava | liquid rock | |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| brushes | rubs against | |
| case | outside cover | inside |
| sails | moves with wind | |
| float | stays on top | sinks |
| parent | source | offspring |
| pod | shell | |
| scattered | distributed | gathered |
| sprouts | off shoots | |
| distance | far off | nearness |
| important | valuable | unnecessary |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| certain | definite | unsure |
| associate | join | |
| insist | demand | allow |
| recognize | know | |
| obedience | submission | disobedience |
| gestures | motions | |
| unreasonable | impractical | sensible |
| approval | favorable opinion | disapproval |
| identical | alike | different |
| eventually | finally | |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| file | line of people | |
| practice | repetition | |
| dangerous | harmful | safe |
| judgment | wisdom | sense |
| ability | capacity | stupidity |
| skillful | expert | untrained |
| abreast | side by side | single file |
| vehicle | automobile or truck | |
| traffic | cars coming and going | |
| dodge | avoid | |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| bitter | sour | sweet |
| apt | likely | hardly |
| sort | type | |
| vessels | containers | |
| clothing | garments | |
| feeble | weak | strong |
| injury | harm | help |
| unpleasant | disagreeable | satisfying |
| chiefly | mainly | |
| wandering | traveling | still |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| promptly | immediately | slowly |
| disturbing | annoying | pleasant |
| apologize | express regret | |
| normal | average | common |
| recognize | know | ignore |
| pester | tease | please |
| curiosity | desire to know | |
| consider | think over | reject |
| eavesdropping | listening secretly | |
| perfectly | exactly | |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| spot | detect | |
| forms | makes | |
| thrilling | exciting | uninteresting |
| spouting | spurting | |
| alert | watchful | sleepy |
| moist | damp | dry |
| dangerous | harmful | safe |
| valuable | precious | inexpensive |
| layer | row | |
| waxy | greasy | |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------------|----------------|
| signaled | sent a message | |
| rushed | dashed | walked |
| decided | made up mind | didn't know |
| reminder | something to help memory | |
| companions | associates | enemies |
| force | make | allow |
| astonishment | surprise | expectation |
| besieged | surrounded | |
| inhabitant | one who lives there | |
| warriors | fighters | |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| account | report | |
| branch | part | |
| certain | sure | undecided |
| dwell | live | |
| probably | likely | unlikely |
| searching | seeking | finding |
| ordinary | common | unusual |
| passage | route | |
| puzzled | doubtful | sure |
| quaint | old-fashioned | modern |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| trouble | worry | content |
| date | chosen companion | |
| tags | follows | leads |
| polite | mannerly | discourteous |
| pointers | suggestions | |
| prefers | chooses | rejects |
| available | easy to get | |
| poised | unembarrassed | shy |
| hostess | one who seats customers | |
| usher | one who escorts people | |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| insect | bug | |
| prey | the hunted | hunter |
| construction | building | destruction |
| devouring | eating | |
| enlarged | made bigger | diminished |
| harmless | offensive | causing injury |
| tropics | warm regions | poles |
| pests | nuisances | |
| florist | a flower seller | |
| spindly | long and thin | |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| armed | carrying weapons | unarmed |
| covered | traveled | |
| knew | learned about | ignorant of |
| plains | flat lands | hills |
| top | highest | bottom |
| allowed | permitted | forbade |
| famous | well known | unknown |
| messages | communications | |
| opposite | contrary | same |
| mounted | on horseback | walking |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| anxiously | worriedly | contentedly |
| severe | extreme | light |
| harvest | reap | sow |
| numerous | many | few |
| injured | harmed | helped |
| satisfaction | delight | discontent |
| mingled | combined | separated |
| vigorous | energetic | feeble |
| hues | colors | |
| worries | anxieties | calmness |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| banded | joined together | separated |
| chanced | accidentally happened | planned |
| game | hunted animals | hunter |
| cleverer | more intelligent | more stupid |
| herds | groups of animals | |
| roamed | wandered | |
| flavor | taste | |
| invented | thought out | |
| crude | rough | refined |
| scant | scarce | sufficient |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| chance | opportunity | |
| average | ordinary | unusual |
| appointments | fixed meetings | |
| attracts | draws toward | |
| career | occupation | |
| expert | trained | unskillful |
| responsible | trustworthy | undependable |
| accurately | exactly | incorrectly |
| advanced | promoted | held back |
| executive | manager | worker |

READING FOR MEANING - LEVEL 7Test 1

Copy the numbered words in the left hand column.
Then pair each word with a lettered word from the
right hand column - synonyms from 1-10 and
antonyms from 11-20.

| <u>Synonyms</u> | | <u>Antonyms</u> | |
|-----------------|---------------|-----------------|-----------------|
| 1. serious | a. untrained | 11. protect | m. dissatisfied |
| 2. trading | b. framework | 12. contented | n. concealed |
| 3. quantities | c. freight | 13. enough | o. restored |
| 4. suited | d. exchanging | 14. ruined | p. release |
| 5. merchants | e. erected | 15. seize | q. neglect |
| 6. skillful | f. grave | 16. stern | r. gathered |
| 7. structure | g. friend | 17. enormous | s. sufficient |
| 8. trails | h. amounts | 18. certain | t. unsure |
| 9. cargo | i. country | 19. exposed | u. tiny |
| 10. built | j. adapted | 20. scattered | v. famous |
| | k. salesmen | | w. gloomy |
| | l. routes | | x. bow |

READING FOR MEANING - LEVEL 7Test 2

Copy the numbered words in the left hand column.
Then pair each word with a lettered word from the
right hand column - synonyms from 1-10 and
antonyms from 11-20.

| <u>Synonyms</u> | | <u>Antonyms</u> | |
|-----------------|---------------|------------------|--------------|
| 1. attractive | a. mixtures | 11. unreasonable | m. different |
| 2. common | b. motions | 12. identical | n. frees |
| 3. combination | c. delightful | 13. fortunate | o. stop |
| 4. associate | d. watch | 14. quarrel | p. sensible |
| 5. recognize | e. ordinary | 15. excellent | q. unsure |
| 6. obedience | f. surrounded | 16. captures | r. unlucky |
| 7. gestures | g. know | 17. continue | s. slowly |
| 8. patrol | h. anger | 18. certain | t. agreement |
| 9. dodge | i. avoid | 19. promptly | u. strong |
| 10. besieged | j. submission | 20. disturbing | v. poor |
| | k. join | | w. pleasant |
| | l. dismal | | x. constant |

READING FOR MEANING - LEVEL 7Key Test 1Synonyms

1. f
2. d
3. h
4. j
5. k
6. a
7. b
8. l
9. c
10. e

Antonyms

11. q
12. m
13. s
14. o
15. p
16. x
17. u
18. t
19. n
20. r

Key Test 2Synonyms

1. c
2. e
3. a
4. k
5. g
6. j
7. b
8. d
9. i
10. f

Antonyms

11. p
12. m
13. r
14. t
15. v
16. n
17. o
18. q
19. s
20. w

LEVEL 8

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| can | preserve | let spoil |
| garments | clothing | |
| machine | power driven device | |
| aside | to one side | behind |
| dye | color | bleach |
| kernel | grain of seed | |
| industrial | manufacturing | agricultural |
| card | comb animals | |
| threshing | beating | |
| snorting | puffing | |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| property | possessions | |
| scampered | hastened away | crept |
| possessing | owning | losing |
| amazement | surprise | |
| conjecturing | guessing | knowing |
| vicious | wicked | good |
| unguarded | unprotected | defended |
| hollering | shouting | whispering |
| microscopic | insignificant | great |
| philosophy | rules for living | |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| healthy | strong | sickly |
| contract | shrink | expand |
| flings | throws | catches |
| report | explosion | |
| split | tear | put together |
| moist | damp | dry |
| provided | furnished | took away |
| scattered | distributed | gathered |
| twisting | turning | unwinding |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------------|----------------|
| companies | business firms | |
| draw | pull out | return |
| fenced | surrounded | open |
| lines | routes | |
| run | operate | |
| dash | rush | walk |
| rough | rugged | smooth |
| fording | crossing shallow water | |
| section | part | whole |
| uneven | not level | smooth |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| tempted | tested | resisted |
| minor | less important | major |
| responsible | dutiful | unreliable |
| conclude | end | begin |
| tragedy | disaster | comedy |
| conceptions | opinions | misconceptions |
| clues | hints | |
| confronted | faced | |
| contrast | difference | likeness |
| definitions | meanings | |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| supplies | provisions | lack of needs |
| usually | generally | uncommonly |
| difficult | hard | easy |
| employed | hired | not working |
| erected | built | destroyed |
| proper | appropriate | unsuited |
| task | job | idleness |
| invisible | not seen | apparent |
| foreman | manager | worker |
| haul | drag | push |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| covered | hidden | exposed |
| mined | dug from earth | |
| linings | inside coverings | outsides |
| stretch | extend | shrink |
| industry | manufacture | |
| supplies | provides | |
| fiber | a filament | |
| province | a division of a country | |
| stainless | stain-proof | rusty |
| nickel | a metal | |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| held in check | controlled | freed |
| estimated | guessed | made sure |
| essential | needed | unnecessary |
| permanent | lasting | temporary |
| lessened | reduced | increased |
| economically | inexpensively | wastefully |
| occasional | sometimes | often |
| desirable | worthwhile | worthless |
| uprooted | torn out | planted |
| principle | rule of action | |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| achieved | succeeded | failed |
| pilgrimages | journeys | |
| triumphantly | victoriously | unsuccessfully |
| precariously | uncertainly | securely |
| uninjured | unhurt | damaged |
| celebration | special occasion | |
| hitched | fastened | loosened |
| pursued | chased | caught |
| clinging | holding | loosening |
| threat | promise to hurt | |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| limited | kept within bounds | unrestricted |
| authorities | experts | apprentices |
| devoting | dedicating | |
| apparently | evidently | not seen |
| sustain | keep alive | |
| nourishing | healthful | unhealthful |
| vital | pertaining to life | deadly |
| hazard | danger | safety |
| relaxed | relieved | tense |
| strenuous | energetic | passive |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| tire | exhaust | revive |
| wild | untamed | civilized |
| dread | fear | confidence |
| difficulties | troubles | pleasures |
| vast | immense | small |
| refuse | decline | accept |
| cattle | livestock | |
| spur | sharp point | |
| reservations | land set aside | |
| balk | refuse to move | go forward |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| welcome | greet | repulse |
| gathered | assembled | adjourned |
| seldom | rarely | frequently |
| reasonable | sensible | foolish |
| remedy | cure | cause |
| legally | lawfully | unlawfully |
| audience | spectators | performers |
| attentive | interested | bored |
| accepted | received | rejected |
| distant | far away | close |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| held | absorbed attention | lost |
| curious | eager | not interested |
| distressed | worried | calm |
| observe | examine | |
| appearance | coming into view | disappearance |
| imprisoned | caught | freed |
| outcome | result | cause |
| situation | emergency | |
| stroll | quiet walk | race |
| alighted | landed | flew |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| bills | beaks | |
| hooked | bent | straight |
| crushing | grinding | |
| convenient | handy | beyond reach |
| searches | hunts | finds |
| slender | slim | stout |
| hovers | flutters | flies |
| reappearing | comes back into sight | disappearing |
| rodents | small mammals | |
| spies | sees | |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|---------------------|
| enemies | foes | friends |
| ancient | old | modern |
| barred | excluded | accepted |
| probably | likely | hardly |
| worship | adoration | sacrilege |
| ceremonies | rites | informal gatherings |
| legends | myths | true stories |
| arms | weapons | |
| bearing | growing | withering |
| pagan | unbeliever | faithful |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| apparent | evident | hidden |
| instinct | an unlearned tendency | reason |
| plentiful | abundant | scarce |
| satisfactory | adequate | unsatisfactory |
| entirely | wholly | partly |
| opponent | rival | partner |
| theory | an intelligent guess | proof |
| quarters | places to live | |
| speculations | guesses | assurances |
| laboratory | scientific workshop | |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|------------------|
| pack | camper's bundle | |
| signals | predictions | |
| started | lighted | extinguished |
| sling | put on back | |
| sturdier | stronger | weaker |
| pitch | set tent firmly | |
| profit | gain | lose |
| annually | yearly | monthly |
| experience | learning | lack of practice |
| grumbler | complainer | |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| control | regulate | run freely |
| according | in agreement with | disagreeing |
| familiar | well known | uncommon |
| originally | in the beginning | finally |
| expression | a saying | |
| attached | joined | disconnected |
| widened | broadened | narrowed |
| collector | receives money | payer |
| intervals | spaces | |
| shun | avoid | invite |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| influence | power | |
| limited | checked | |
| opinion | belief | fact |
| realize | understand | |
| basis | foundation | structure |
| independence | freedom | |
| detect | uncover | conceal |
| investigate | inspect | ignore |
| interpretations | explanations | |
| vital | necessary | not needed |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| busiest | most used | unused |
| grain | cereal seeds | |
| headed | went toward | retreated |
| hurry | speed | slowness |
| machinery | mechanical equipment | |
| spices | seasonings | |
| cargoes | freight | |
| dyed | changed color | bleached |
| seaport | harbor | |
| earn a living | support themselves | depend |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|------------------|
| patterned | designed | |
| gain | acquire | lose |
| goals | aims | |
| complaints | wrongs | satisfactions |
| including | consisting of | excluding |
| struggle | fight | agreement |
| capable | qualified | unable |
| denied | refused | accepted |
| privileges | liberties | denial of rights |
| equal | matching | uneven |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------------|----------------|
| chance | opportunity | impossibility |
| decaying | rotting | thriving |
| flourishes | grows | dies |
| tramp | travel on foot | ride |
| informant | giver of information | learner |
| bog | marshy ground | desert |
| clutches | grasps | drops |
| peat | dried vegetable matter | |
| tourists | travelers | stay at homes |
| vegetation | plants | |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| fixed | directed steadily | wavering |
| jolly | gay | sad |
| ordered | commanded | undirected |
| realized | understood clearly | unaware |
| release | set free | capture |
| forced | compelled | chose |
| advanced | went forward | retreated |
| anxiously | nervously | calmly |
| withstood | resisted | yielded |
| unbounded | unlimited | bounded |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| immediate | right away | slow |
| increased | added to | lessened |
| compelling | forcing | permitting |
| enables | allows | prevents |
| performance | accomplishment | failure |
| supply | provide | withhold |
| pressing | forcing | allowing |
| alternately | taking turns | directly |
| saddle | seat | |
| all-around | whole | one-half |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| weakness | feebleness | strength |
| legend | myth | truth |
| indignantly | angrily | agreeably |
| prevalent | wide-spread | local |
| signal | indication | |
| vermin | small insects | |
| amusement | enjoyment | disgust |
| tidy | neat | careless |
| willingly | of ones own accord | forcefully |
| taught | gave instruction | learned |

READING FOR MEANING - LEVEL 8Test 1

Copy the numbered words on your paper. Beside each word write lettered word which is its Synonym.

- | | | | |
|-----------------|---------------|--------------|----------------|
| 1. garments | a. jewels | b. clothing | c. guardians |
| 2. supplies | a. rely | b. submit | c. provides |
| 3. amazement | a. surprise | b. joy | c. anger |
| 4. conjecturing | a. testing | b. guessing | c. accepting |
| 5. vicious | a. correct | b. tired | c. wicked |
| 6. report | a. agreement | b. explosion | c. comfort |
| 7. responsible | a. noticeable | b. dutiful | c. unable |
| 8. tragedy | a. cruelty | b. work | c. disaster |
| 9. clues | a. hints | b. choices | c. details |
| 10. property | a. accuracy | b. courtesy | c. possessions |

Follow the same directions as above but use Antonyms rather than Synonyms.

- | | | | |
|-----------------|----------------|----------------|-------------|
| 11. dye | a. live | b. bleach | c. check |
| 12. conclude | a. help | b. lift | c. begin |
| 13. microscopic | a. distant | b. great | c. infected |
| 14. contract | a. expand | b. compare | c. hide |
| 15. moist | a. largest | b. dry | c. clean |
| 16. fenced | a. level | b. flooded | c. open |
| 17. tempted | a. resisted | b. warmed | c. tried |
| 18. minor | a. definite | b. clever | c. major |
| 19. contrast | a. likeness | b. agreement | c. content |
| 20. essential | a. combination | b. unnecessary | c. unusual |

READING FOR MEANING - LEVEL 8Test 2

Copy the numbered words on your paper. Beside each word write lettered word which is its Synonym.

- | | | | |
|------------------|--------------|---------------|---------------|
| 1. lessened | a. learned | b. reduced | c. heard |
| 2. achieved | a. succeeded | b. accepted | c. believed |
| 3. devoting | a. desiring | b. dedicating | c. separating |
| 4. strenuous | a. slow | b. artificial | c. energetic |
| 5. dread | a. fear | b. belief | c. wrath |
| 6. gathered | a. decorated | b. assembled | c. celebrated |
| 7. legally | a. joyfully | b. lawfully | c. legibly |
| 8. distressed | a. worried | b. decorated | c. divided |
| 9. convenient | a. regular | b. equal | c. handy |
| 10. satisfactory | a. important | b. adequate | c. sensible |

Follow the same directions as above, but use Antonyms rather than Synonyms.

- | | | | |
|------------------|-----------------|-----------------|---------------|
| 11. desirable | a. different | b. worthless | c. peculiar |
| 12. precariously | a. securely | b. punctual | c. loyal |
| 13. limited | a. unrestricted | b. remote | c. temporary |
| 14. relaxed | a. related | b. tricked | c. tense |
| 15. seldom | a. straight | b. frequently | c. lazy |
| 16. accepted | a. resulted | b. figured | c. rejected |
| 17. plentiful | a. scarce | b. pleasing | c. boring |
| 18. attached | a. invaded | b. disconnected | c. discovered |
| 19. invisible | a. entire | b. generous | c. apparent |
| 20. advance | a. retreated | b. inspired | c. undecided |

READING FOR MEANING - LEVEL 8Key Test 1Synonyms

1. b
2. c
3. a
4. b
5. c
6. b
7. b
8. c
9. a
10. c

Antonyms

11. b
12. c
13. b
14. a
15. b
16. c
17. a
18. c
19. a
20. b

Key Test 2Synonyms

1. b
2. a
3. b
4. c
5. a
6. b
7. b
8. a
9. c
10. b

Antonyms

11. b
12. a
13. a
14. c
15. b
16. c
17. a
18. b
19. c
20. a

LEVEL 9

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| flood | overflow | |
| combination | union | individual |
| basins | lands drained by rivers | |
| experts | trained people | |
| major | most important | minor |
| moist | damp | dry |
| disastrous | causing distress | joyous |
| simultaneously | at the same time | |
| impossibility | improbability | likelihood |
| tributary | branch of a river | |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| trouble | difficulty | happiness |
| realize | know | to be unaware |
| reasonable | sensible | unthinking |
| consult | confer with | advise |
| enables | helps | hinders |
| appearance | manner | |
| achieve | gain | fail |
| skillful | clever | untrained |
| comments | remarks | |
| foretell | prophecy | look back |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| carted | carried away | |
| business | task | idleness |
| national | pertaining to nation | local |
| stretched | extended | contracted |
| tolls | charges | |
| crushed | broken up | |
| droves | flocks | |
| swung | moved to and fro | stayed still |
| thoroughfare | highway | side road |
| turnpike | toll-road | free-way |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| initial | first | last |
| foreseen | looked for | unexpected |
| proportion | proper balance | |
| violence | furios action | calmness |
| hopeless | without hope | cheerful |
| reactions | responses | |
| indulge | yield to | resist |
| emotional | excitable | steady |
| steadiness | constancy | wavering |
| humorless | unamusing | humorous |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| produce | products | raw materials |
| organized | systematic | disorderly |
| enterprises | projects | |
| financial | pertaining to money | |
| retail | selling to consumers | wholesale |
| metropolitan | pertaining to a city | rural |
| textiles | fabrics | |
| discharge | unload freight | load |
| liner | passenger ship | |
| pier | dock | |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| actual | real | artificial |
| purchase | buy | sell |
| insist | demand | allow |
| development | growth | decay |
| exceptions | differences | likenesses |
| overlook | disregard | notice |
| compacted | pressed together | separated |
| approximately | nearly | exactly |
| exposed | unprotected | covered |
| drought | dryness | moisture |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| timed | regulated | unadjusted |
| struggle | fight | peace |
| altered | transformed | unchanged |
| successful | triumphant | defeated |
| territory | land | |
| incident | occurrence | |
| introduction | beginning | conclusion |
| significant | notable | unimportant |
| likelihood | indication | no chance |
| gridiron | football field | |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|------------------|
| distinguish | differentiate | compare |
| aware | realize | not conscious of |
| subtle | clever | blunt |
| witty | amusing | somber |
| crude | rough | refined |
| exceptionally | extraordinarily | ordinarily |
| specific | precise | indefinite |
| concerned | anxious | disinterested |
| classify | put in order | disarrange |
| obvious | clear | obscure |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| design | plan | |
| distinct | clear | indefinite |
| elements | parts | combinations |
| resembles | is similar to | is unlike |
| spiritual | inspiring | worldly |
| function | purpose | uselessness |
| indispensable | necessary | unessential |
| adornments | ornaments | simplicity |
| lateral | sideways | |
| replaced | substituted | |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| conditions | circumstances | |
| fearful | alarmed | secure |
| generous | charitable | selfish |
| achieved | accomplished | failed |
| existing | current | past |
| foreigners | immigrants | natives |
| hatreds | enmities | loves |
| astonishment | amazement | expectation |
| ridiculous | silly | sensible |
| fundamentally | basically | not important |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| figure | number | |
| plans | designs | accidents |
| safety | protection | danger |
| exact | correct | inaccurate |
| flourishing | prosperous | decaying |
| countless | without number | definite |
| inefficient | incapable | competent |
| everyday | routine | not usual |
| vocation | career | |
| responsible | the reason | |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| telling | remarkable | ordinary |
| granted | assumed to be true | factual |
| agencies | bureaus | |
| distributed | divided | accumulated |
| local | in a small district | at large |
| authorities | officials | subordinates |
| inconvenience | distress | advantage |
| bounty | reward | |
| disposal | removal | |
| old-fashioned | antique | modern |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| centers | junctions | |
| headed | proceeded | returned |
| hides | animal skins | |
| markets | places for trade | |
| plains | level lands | hills |
| brand | mark of ownership | |
| tame | manageable | wild |
| ranges | grassy lands | |
| climate | condition of atmosphere | |
| fatten | put weight on | reduce |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| benefit | help | hindrance |
| bound | fettered | untied |
| local | in the neighborhood | national |
| system | plan | chaos |
| active | lively | quiet |
| process | method | |
| prosperous | successful | unfortunate |
| ability | power | incapability |
| depression | poor times | prosperity |
| eventual | finally | |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| limited | confined | unrestricted |
| appeal | attraction | disinterest |
| encourage | inspire | discourage |
| gradually | by degrees | suddenly |
| succession | in a series | |
| definitely | plainly | unclearly |
| harmful | injurious | beneficial |
| desirable | worth having | unwanted |
| dissatisfied | annoyed | pleased |
| discard | throw away | retain |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| provided | supplied | refused |
| zones | regions | |
| endure | continue | decay |
| barren | unproductive | fertile |
| thrive | prosper | wither |
| adjusts | accustoms | unused to |
| contented | satisfied | displeased |
| frigid | very cold | torrid |
| jungle | wild land | |
| menagerie | zoo | |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| frequently | often | seldom |
| consulted | sought council | advised |
| remedies | cures | causes |
| offending | injurious | pleasing |
| prolonged | continued | interrupted |
| competent | capable | unqualified |
| rectified | remedied | uncorrected |
| blurred | dim | clear |
| prescribing | ordering a remedy | |
| treatment | medical care | |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| bog | swamp | desert |
| twilight | after sunset | dawn |
| offered | presented | refused |
| council | conference | |
| varied | different | similar |
| guiding | leading | following |
| appointed | chosen | unnamed |
| dispute | conflict | agreement |
| compact | close together | disunited |
| vast | very large | minute |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------------|----------------|
| problem | difficulty | solution |
| controlled | held in check | uncurbed |
| reservoir | storage places for water | |
| ravines | gorges | |
| extravagant | wasteful | thrifty |
| barriers | obstacles | entrances |
| significance | relevance | unimportance |
| authority | power | submission |
| materially | considerably | |
| collectively | together | separately |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| demanded | insisted upon | relinquished |
| investigated | inquired into | |
| experienced | has direct knowledge | untrained |
| preferred | chose | rejected |
| contrasts | differences | similarities |
| sweltering | tortured by heat | freezing |
| actual | genuine | unreal |
| eliminate | discard | add |
| regulated | arranged | disorganized |
| survey | inspect | |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|-----------------|
| charity | kindness | selfishness |
| gratitude | thankfulness | thanklessness |
| remarkable | extraordinary | ordinary |
| responsibility | duty | independability |
| arrival | coming | leaving |
| practical | useful | of little use |
| conclusion | finish | opening |
| misfortune | calamity | luck |
| destitute | poor | wealthy |
| brief | short | long |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| soil | earth | |
| autumn | season of the year | spring |
| buried | put into the earth | dug up |
| frozen | became solid | thawed |
| shallow | not deep | |
| surroundings | environment | |
| accord | harmony | disagreement |
| shallow | having little depth | deep |
| experiment | test | prove |
| recorded | indicated | unregistered |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| centered | collected | dispersed |
| benefit | aid | hinder |
| models | patterns | |
| witness | to observe | |
| prominent | noted | unknown |
| talent | genius | incompetence |
| activities | amusements | |
| observance | celebrating holidays | |
| intricate | involved | simple |
| amusement | fun | serious thing |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| prized | valued | worthless |
| masters | experts | apprentices |
| genuine | real | artificial |
| antique | ancient | contemporary |
| audience | spectators | performers |
| exquisite | beautiful | ugly |
| priceless | precious | worthless |
| suspect | guess | be sure of |
| decrepit | feeble | vigorous |
| performances | concerts | |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| feeds | supplies with materials | |
| mills | textile factories | |
| people | persons | |
| touch | contact | keep away from |
| exchange | trade | retain |
| system | arrangement | disorder |
| enables | makes possible | prevents |
| dependent | needs support | self-reliant |
| businessmen | traders | customers |
| Orient | the East | the West |

READING FOR MEANING - LEVEL 9Test 1

- | | | | |
|------------------|----------------|-------------------|-----------------|
| a. combinations; | b. reasonable; | k. violence; | l. purchase; |
| c. initial; | d. steadiness; | m. approximately; | n. drought; |
| e. humorless; | f. organized; | o. successful; | p. distinguish; |
| g. insist; | h. exceptions; | q. witty; | r. crude; |
| i. timed; | j. altered | s. obvious; | t. enables. |

Copy the list of words below on your paper. Then write each of the words above beside its Synonym.

1. systematic
2. transformed
3. differences
4. first
5. union
6. constancy
7. sensible
8. unamusing
9. demand
10. regulated

Copy the list of words below on your paper. Then write each of the words above beside its Antonym.

11. refined
12. moisture
13. calmness
14. somber
15. hinders
16. exactly
17. defeated
18. sell
19. compare
20. obscure

READING FOR MEANING - LEVEL 9Test 2

a. significant; b. subtle;
 c. specific; d. function;
 e. flourishing; f. prolonged;
 g. eliminate; h. conclusion;
 i. brief; j. intricate.

k. indispensable; l. generous;
 m. ridiculous; n. inefficient;
 o. rectified; p. offered;
 q. extravagant; r. preferred;
 s. prominent; t. priceless.

Copy the list of words below on your paper. Then write each of the words above beside its Synonym.

1. prosperous
2. short
3. clever
4. involved
5. discard
6. precise
7. purpose
8. continued
9. finish
10. notable

Copy the list of words below on your paper. Then write each of the words above beside its Antonym.

11. sensible
12. refused
13. competent
14. rejected
15. unessential
16. uncorrected
17. unknown
18. selfish
19. worthless
20. thrifty

READING FOR MEANING - LEVEL 9Key Test 1Synonyms

1. f
2. j
3. h
4. c
5. a
6. d
7. b
8. e
9. g
10. i

Antonyms

11. r
12. n
13. k
14. q
15. t
16. m
17. c
18. l
19. p
20. s

Key Test 2Synonyms

1. e
2. i
3. b
4. j
5. g
6. c
7. d
8. f
9. h
10. a

Antonyms

11. m
12. p
13. n
14. r
15. k
16. o
17. s
18. l
19. t
20. q

LEVEL 10

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| whole | entire | part |
| wiped out | destroyed | preserved |
| groves | groups of trees | |
| introduced | brought in | removed |
| patient | enduring hardship | irritable |
| serious | causing anxiety | trivial |
| appealed | invoked help | demanded |
| situation | state of affairs | |
| observation | accurate watching | disinterest |
| harmful | detrimental | beneficial |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| decorated | ornamented | plain |
| modern | up to date | old-fashioned |
| salaried | receiving pay | unpaid |
| attractive | pleasing | uninviting |
| exposed | unprotected | covered |
| practical | useful | ornamental |
| recognize | acknowledge | does not know |
| ingenuity | talent | lack of skill |
| primarily | chiefly | subordinately |
| leisurely | slowly | quickly |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|-----------------|
| true | authentic | false |
| alarmed | apprehensive | not worried |
| colonies | groups | individuals |
| normally | customarily | not usually |
| visible | exposed to view | unseen |
| evidence | indication | no sign of |
| maintain | keep up | neglect |
| conspicuous | easily recognized | indistinct |
| widespread | extensive | in a small area |
| spouses | husbands or wives | |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| labor | workers in a group | management |
| understand | know | not aware of |
| income | salary | expenditures |
| progressive | moving forward | recessive |
| activity | thing to do | laziness |
| representatives | delegates | public |
| agreements | understandings | arguments |
| encourage | stimulate | discourage |
| interview | questions about jobs | |
| beneficial | helpful | harmful |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| family | group of plants | |
| missed | noticed the absence | unnoticed |
| patch | small garden | |
| present | attending | absent |
| fowl | birds used as food | |
| variety | assortment | the same |
| farewell | good-bye | hello |
| dessert | the last part of a meal | |
| eventually | at last | originally |
| travels | journeys | |

UNIT 5

| <u>Key Word</u> | <u>Synonyms</u> | <u>Antonyms</u> |
|-----------------|-----------------------|-----------------|
| haul | distance carried | |
| mill | where flour is ground | |
| plain | flat land | hill |
| rotation | alternating | |
| culture | cultivation | not growing |
| relatively | comparatively | absolutely |
| yield | produce | hold |
| productive | fertile | barren |
| effective | profitable | unproductive |
| competitors | rivals | partners |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| shed | threw off | soaked up |
| scampered | hastened away | crawled |
| mysterious | baffling | obvious |
| alien | foreign | friendly |
| burrowed | dug into the ground | |
| cycle | series of changes | |
| consecutive | following one another | alternate |
| isolated | secluded | with others |
| protective | defensive | neglectful |
| apprehension | anxiety | peace |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| abundance | plenty | scarcity |
| gradually | by degrees | all at once |
| develop | evolve | wither |
| substitute | replacement | |
| inhabitants | residents | |
| absorbs | uses up | throws off |
| respiration | breathing | suffocation |
| adult | mature | young |
| aquarium | a water tank | |
| curious | eager to know | disinterested |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------------|----------------|
| ringing | clear and strong | muffled |
| want | poverty | wealth |
| rule | authority | ruled |
| risked | took chances | was sure of |
| hunger | lack of food | plenty |
| sacred | respected | desecrated |
| ideals | high standards | actualities |
| democracy | government by the people | dictatorship |
| opinions | judgments | |
| worship | devotion to God | scorn |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------------|----------------|
| feel | atmosphere | |
| observed | closely examined | ignored |
| evident | perceptible | not apparent |
| estimate | skillful guesses | calculations |
| preserve | place reserved for animals | |
| share | divide | keep |
| novel | strange | ordinary |
| privileged | had special liberties | unprivileged |
| status | rank | |
| startles | frightens | calms |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| design | sketch | structure |
| decorative | ornamental | unadorned |
| satisfaction | gratification | displeasure |
| appearance | external properties | |
| recognize | identify | ignore |
| persuading | enticing | |
| functioning | working | out of order |
| usefulness | serviceability | of no value |
| basic | primary | top |
| durability | ability to last | fragility |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| portion | part | whole |
| commercially | pertaining to trade | |
| cultivated | grown | destroyed |
| imitated | duplicated | originated |
| readily | quickly | slowly |
| extensively | widely | narrowly |
| economically | inexpensively | extravagantly |
| resemblance | likeness | difference |
| bulky | massive | small |
| by-products | secondary products | products |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|-----------------|
| ambition | aspiration | laziness |
| practical | useful | useless |
| situation | circumstance | |
| discussion | discourse | |
| apparently | appeared to be | actually |
| development | growth | decay |
| deprived | excluded from | given |
| theories | conjectures | facts |
| realities | actualities | things imagined |
| emerged | issued | disappeared |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| starches | carbohydrates | proteins |
| regard | consider | overlook |
| innumerable | countless | few |
| yearning | craving | not wanting |
| install | put in | remove |
| investigation | inquiry | disinterest |
| sluggish | slow | vigorous |
| commonplace | ordinary | noteworthy |
| shortage | deficiency | abundance |
| unobtainable | cannot be procured | within reach |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| fellow | an equal | |
| hues | colors | |
| customs | habits | irregularities |
| whit | the smallest bit | |
| throng | multitude | sprinkling |
| festival | celebration | |
| picturesque | quaint | usual |
| vivid | intense | dull |
| precepts | principles | |
| distinguishable | discernible | indistinct |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| cling | hold fast | drop |
| hammered | beaten into shape | |
| pitching | flinging | catching |
| yoke | pair of oxen | |
| improvements | advances | damages |
| original | the first | latest |
| brute | animal | human |
| butt | thick end | point |
| headache | predicament | happiness |
| jounced | jolted | ran smoothly |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| accordingly | consequently | |
| influence | effect | powerlessness |
| abundant | ample | insufficient |
| exert | wield | withdraw |
| harmless | causing no harm | injurious |
| ignorance | lack of knowledge | being informed |
| misunderstood | misjudged | comprehended |
| thrive | flourish | decay |
| annihilate | obliterate | construct |
| disapprove | object | sanction |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| lettering | drawing letters | printing |
| operation | steps taken | |
| deposits | masses of minerals | |
| graduated | divided into steps | ungraded |
| export | sending goods out | import |
| insured | guaranteed | chanced |
| brittle | fragile | firm |
| commodity | merchandise | |
| monopoly | exclusive ownership | company |
| basic | indispensable | peak |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| consider | ponder | ignore |
| venture | chance | security |
| exhausted | worn-out | energetic |
| aroused | stimulated | bored |
| curiosity | inquisitiveness | disinterest |
| meditations | musings | |
| bewildered | mystified | certain |
| irritating | annoying | pleasing |
| intervened | interposed | stayed out of |
| clamped | locked | opened |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| supply | amount | lack |
| acquire | obtain | lose |
| astonished | astounded | expected |
| element | ingredient | compound |
| gradually | by degrees | suddenly |
| ordinary | regular | extraordinary |
| process | procedure | lack of method |
| discontinued | suspended | kept going |
| intensified | heightened | decreased |
| noticeably | prominently | invisibly |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| dogged | hounded | caught |
| resources | ingenuity | lack of ideas |
| situated | located | |
| transportation | mode of conveyance | |
| communications | exchanges of thought | reservations |
| jostled | elbowed | |
| remote | far removed | close by |
| casual | carefree | worried |
| dependent | needing support | reliable |
| insecurity | feeling unsafe | surety |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------------|----------------|
| cultivated | improved through training | untrained |
| derived | came from | returned to |
| estimating | gauging | guessing |
| attendant | present | absent |
| orienting | getting used to | not adjusting |
| normal | average | irregular |
| consciousness | awareness | ignorance |
| equilibrium | balance | unsteadiness |
| physiologist | a student of the body | |
| actually | in fact | untrue |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------------------|----------------|
| numbering | amounting to | |
| host | body on which parasites live | parasite |
| swarm | fly in large numbers | fly singly |
| comb | investigate | ignore |
| vital | necessary | unessential |
| marshalled | assembled | dispersed |
| countless | incalculable | numbered |
| harmful | detrimental | beneficial |
| carnivorous | flesh eating | herbivorous |
| extermination | annihilation | development |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------------|-----------------|
| influence | sway | ineffectiveness |
| arising | proceeding | declining |
| oreover | further | |
| otherwise | under other conditions | |
| practically | actually | not really |
| pursuits | vocations | |
| handicaps | drawbacks | aids |
| concerned | taken into consideration | disinterested |
| variations | differences | likenesses |
| pre-eminently | supremely | unimportantly |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------------|----------------|
| catch | quantity of fish caught | |
| tells | reveals | conceals |
| meal | something ground to powder | |
| port | harbor | high seas |
| stern | rear of a ship | bow |
| swarms | in great numbers | only a few |
| wharves | platform for ships | |
| bruised | marred | beautified |
| delivered | transferred to | returned |
| location | position | |

READING FOR MEANING - LEVEL 10Test 1

Copy the following words on your paper. On the same line with the numbered word are two lettered words, one a Synonym, and one an Antonym of the numbered word. On the dotted line between the letter and the word write S if the word is the Synonym and A if it is the Antonym.

- | | | |
|------------------|--------------------|-------------------|
| 1. harmful | a...detrimental | b...beneficial |
| 2. attractive | a...uninviting | b...pleasing |
| 3. primarily | a...subordinately | b...chiefly |
| 4. leisurely | a...slowly | b...quickly |
| 5. agreements | a...understandings | b...arguments |
| 6. effective | a...profitable | b...unproductive |
| 7. competitors | a...partners | b...rivals |
| 8. mysterious | a...baffling | b...obvious |
| 9. alien | a...foreign | b...friendly |
| 10. develop | a...evolve | b...wither |
| 11. sacred | a...desecrated | b...respected |
| 12. novel | a...strange | b...ordinary |
| 13. recognize | a...identify | b...ignore |
| 14. imitated | a...originated | b...duplicated |
| 15. economically | a...inexpensively | b...extravagantly |
| 16. bulky | a...small | b...massive |
| 17. ambition | a...aspirations | b...laziness |
| 18. theories | a...conjectures | b...facts |
| 19. emerged | a...disappeared | b...issued |
| 20. innumerable | a...few | b...countless |

READING FOR MEANING - LEVEL 10Test 2

Copy the following words on your paper. On the same line as the numbered word are two lettered words, one a Synonym and one an Antonym of the numbered word. On the dotted line between the letter and the word write S if it is the Synonym and A if it is the Antonym.

- | | | |
|------------------|-----------------|------------------|
| 1. sluggish | a...vigorous | b...slow |
| 2. commonplace | a...noteworthy | b...ordinary |
| 3. picturesque | a...quaint | b...usual |
| 4. vivid | a...dull | b...intense |
| 5. improvements | a...damages | b...advances |
| 6. misunderstood | a...misjudged | b...comprehended |
| 7. annihilate | a...obliterate | b...construct |
| 8. disapprove | a...sanction | b...object |
| 9. productive | a...fertile | b...barren |
| 10. vital | a...unessential | b...necessary |
| 11. insured | a...guaranteed | b...chances |
| 12. brittle | a...firm | b...fragile |
| 13. bewildered | a...certain | b...mystified |
| 14. intensified | a...heightened | b...decreased |
| 15. casual | a...worried | b...carefree |
| 16. harmful | a...detrimental | b...beneficial |
| 17. protective | a...defensive | b...neglectful |
| 18. apprehension | a...peace | b...anxiety |
| 19. shortage | a...deficiency | b...abundance |
| 20. exert | a...withdraw | b...wield |

READING FOR MEANING - LEVEL 10

| <u>Key Test 1</u> | | <u>Key Test 2</u> | |
|-------------------|------------------|-------------------|------------------|
| 1. | a...S b...A | 1. | a...A b...S |
| 2. | a...A b...S | 2. | a...A b...S |
| 3. | a...A b...S | 3. | a...S b...A |
| 4. | a...S b...A | 4. | a...A b...S |
| 5. | a...A b...S | 5. | a...A b...S |
| 6. | a...S b...A | 6. | a...S b...A |
| 7. | a...S b...A | 7. | a...S b...A |
| 8. | a...S b...A | 8. | a...A b...S |
| 9. | a...S b...A | 9. | a...S b...A |
| 10. | a...S b...A | 10. | a...A b...S |
| 11. | a...A b...S | 11. | a...S b...A |
| 12. | a...S b...A | 12. | a...A b...S |
| 13. | a...S b...A | 13. | a...A b...S |
| 14. | a...A b...S | 14. | a...S b...A |
| 15. | a...S b...A | 15. | a...A b...S |
| 16. | a...A b...S | 16. | a...S b...A |
| 17. | a...S b...A | 17. | a...S b...A |
| 18. | a...S b...A | 18. | a...A b...S |
| 19. | a...A b...S | 19. | a...S b...A |
| 20. | a...A b...S | 20. | a...A b...S |

LEVEL 11

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------------|----------------|
| mushy | soft and thick | solid |
| attempts | trials | achievements |
| scientist | one who seeks facts | |
| advertised | announced | suppressed |
| experiment | try out | prove |
| wasps | insects | |
| pulp | a soft wet mass | |
| chemicals | pertaining to Chemistry | |
| discovered | disclosed | invented |
| chips | small pieces of wood | |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| ground | pulverized | |
| needs | requirements | non-essentials |
| rough | crude | finished |
| skill | competence | inefficiency |
| demand | urgent need | |
| fashioned | constructed | destroyed |
| settlement | colony | |
| forged | heated and hammered | |
| Colonial | Pre-Revolutionary | |
| persuade | convince | dissuade |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| markets | places for trade | |
| natural | normal | not typical |
| enables | empowers | prevents |
| numerous | plentiful | scarce |
| interior | inland region | coastal area |
| thrive | prosper | decay |
| worthless | unproductive | valuable |
| profitable | remunerative | unproductive |
| neighboring | adjacent | distant |
| maturity | ripeness | rawness |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| apparently | seemingly | actually |
| occasional | casual | frequent |
| thrive | grow vigorously | decay |
| desolation | devastation | growth |
| survive | remain alive | die |
| incessant | unceasing | interrupted |
| oases | fertile places | |
| adaptations | adjustments | |
| embarrassment | humiliation | relief |
| intermittent | periodic | continued |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| benefiting | profiting | injuring |
| refused | declined | accepted |
| achieved | gained | failed |
| device | appliance | |
| energy | force | weakness |
| needful | indispensable | unessential |
| obscure | inconspicuous | prominent |
| realities | actualities | falsities |
| disposal | disposition | |
| fantastic | absurd | sensible |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| truck | dealings | |
| loafed | loitered | worked |
| glance | a hasty look | stare |
| influence | power | weakness |
| locally | limited | widely |
| independent | self-reliant | unreliable |
| primitive | crude | cultured |
| impression | effect | apathy |
| economy | system | |
| retain | to hold | give up |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| storied | famous | unsung |
| ripples | quiet sounds | roars |
| relation | association | irrelevancy |
| solid | stable | unsound |
| favorite | preferred | not chosen |
| established | placed | wiped out |
| leisurely | slowly | hurriedly |
| paradise | state of joy | |
| yearned | craved | had no desire |
| obscure | dim | prominent |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| extends | stretches | contrasts |
| prevent | obstruct | permit |
| quantities | multitudes | small amounts |
| region | area | |
| prey | feed upon | hunt |
| Senate | governing body | constituent |
| chiefly | especially | secondary |
| countless | innumerable | definite |
| fitting | appropriate | unsuitable |
| scour | search | find |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| fired | baked in a kiln | |
| drums | cylinders of oil | |
| ideal | perfection | actual |
| burden | load | |
| parallel | side by side | perpendicular |
| warped | bent out of shape | straightened |
| continuous | connected | broken |
| architects | designers | |
| clamped | held tightly | loose |
| whittle | shave wood | |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| superstitious | ignorant | rational |
| testify | give evidence | withhold |
| injurious | pernicious | beneficial |
| commonly | customarily | not usually |
| deadly | fatal | vital |
| irritated | annoyed | pleased |
| profuse | liberal | scanty |
| compressed | pinched | spread out |
| aggressive | combative | peaceful |
| primarily | originally | finally |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| demonstrations | illustrations | |
| approaching | approximating | diverging |
| cultivated | prepared | lay fallow |
| organize | put in order | disarrange |
| adapt | adjust | unfit |
| inadequate | not enough | sufficient |
| hallowed | honored as sacred | desecrated |
| accustomed | used to | not habitual |
| contaminating | infecting | sterilizing |
| indiscretion | an unwise act | prudence |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------|----------------|
| latter | the last mentioned | former |
| permits | consents to | prohibits |
| combine | unite | separate |
| located | situated | |
| formation | the making of | destruction |
| confronted | faced boldly | retreated |
| purification | cleansing | contamination |
| objectionable | undesirable | inoffensive |
| widely | in many places | locally |
| consumer | user | manufacturer |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|-----------------|
| function | role | |
| acute | piercing | dull |
| apparatus | equipment | |
| blandest | gentlest | most irritating |
| hamper | a covered basket | |
| minor | subordinate | most important |
| saliva | glandular fluid | |
| efficiency | efficacy | inability |
| shriveled | shrunken | flourishing |
| partially | incompletely | entirely |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|-------------------|
| wages | remuneration | |
| abuses | ill-use | uses |
| majority | most | minority |
| developments | outgrowths | regressions |
| extent | degree | |
| tyranny | despotism | self government |
| extension | addition | lessening |
| regulate | govern | having no control |
| suspicious | doubtful | trustful |
| adhere | cling | loosen |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|-------------------|
| power | control | lack of influence |
| moral | standard of goodness | |
| awe-inspiring | commanding respect | |
| decently | rightly | improperly |
| authority | command | lack of power |
| reputation | standing | |
| enterprising | having initiative | being indifferent |
| gruff | curt | agreeable |
| competition | rivalry | partnership |
| depression | doldrums | activity |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|------------------|
| fortunate | favorable chance | unlucky |
| declined | deteriorated | thrived |
| develop | grow | regress |
| favorable | propitious | not advantageous |
| plentiful | ample | scanty |
| maintain | sustain | destroy |
| factor | circumstance | |
| rival | competitor | co-worker |
| thriving | prospering | languishing |
| barriers | hindrances | helps |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| chains | series of mountains | |
| open | without forests | uncleared |
| latter | the last part | former |
| sawmills | where timber is sawed | |
| cultivated | tilled | fallow |
| process | series of actions | |
| foundries | where metal is molded | |
| illustration | an example | |
| ascend | mount | descend |
| transformed | converted | unaltered |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|----------------|
| skirts | borders | |
| churned | propelled forward | |
| gliding | moving smoothly | stumbling |
| perched | sitting high | |
| laden | heavily loaded | unburdened |
| tonnage | weight of goods | |
| navigation | management of ships | |
| brimming | filled to the top | empty |
| obstacle | hindrance | incentive |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| cuts | portions | |
| grades | kinds | |
| leading | prominent | less important |
| run | total | |
| prepared | ready to eat | uncooked |
| serious | grave | unimportant |
| authorities | specialists | |
| balanced | even | unequal |
| supplement | something added | |
| popularity | being liked | disapproval |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|----------------|
| earnestly | seriously | insincerely |
| uniformly | unchanging | unevenly |
| hinders | prevents | helps |
| organized | formed | disorganized |
| responsible | accountable | irresponsible |
| cereal | grain | |
| devising | planning | |
| specializing | concentrating | generalizing |
| co-operative | working together | selfish |
| perishable | easily spoiled | lasting |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|-----------------|
| shocks | impacts | pleasant sounds |
| latter | last | former |
| properties | attributes | essence |
| flexible | pliant | rigid |
| terrific | excessive | inadequate |
| presence | existence | absence |
| practically | virtually | theoretically |
| dependent | by our need | reliant |
| brittle | fragile | elastic |
| exceedingly | remarkably | deficiently |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|-----------------|
| end | objective | without purpose |
| requires | necessitates | has no need |
| sources | origins | terminations |
| constitutes | composes | destroys |
| notably | conspicuously | not remarkably |
| profitable | bringing gain | disadvantageous |
| structure | framework | destruction |
| shortage | deficiency | abundance |
| mechanical | by machines | by hand |
| utilization | use | uselessness |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|------------------|
| established | organized | demolished |
| esteemed | respected | dishonored |
| flourished | prospered | declined |
| expired | terminated | commenced |
| prominent | eminent | obscure |
| reputation | prestige | |
| abolished | cancelled | established |
| finance | capital | |
| disabled | maimed | restored |
| franchise | privilege | disqualification |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| practically | really | theoretically |
| adopted | appropriated | rejected |
| credited | praised | blamed |
| frail | flimsy | strong |
| construction | building | demolition |
| exception | omission | the rule |
| capacious | ample | limited |
| durable | lasting | perishable |
| isolated | detached | unseparated |
| ingeniously | resourcefully | not expertly |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|--------------------|
| beaten path | usual course | |
| furnishings | equipment | emptiness |
| reserved | retiring | demonstrative |
| clashing | in conflict with | agreeing |
| contrast | difference | likeness |
| apparently | seemingly | dubiously |
| aristocratic | patrician | common |
| controversy | debate | agreement |
| provocation | stimulus | lack of motivation |
| impressive | imposing | insignificant |

READING FOR MEANING - LEVEL 11Test 1

Copy the following groups of words on your paper. If the lettered word is a Synonym of the numbered word, write S beside it. If it is an Antonym, write A.

- | | |
|---|--|
| 1. advertised a. announced b. suppressed | 2. rough a. finished b. crude |
| 3. skill a. inefficiency b. competence | 4. enables a. empowers b. prevents |
| 5. profitable a. unproductive b. remunerative | 6. occasional a. frequent b. casual |
| 7. incessant a. unceasing b. interrupted | 8. intermittent a. periodic b. continued |
| 9. obscure a. prominent b. inconspicuous | 10. fantastic a. sensible b. absurd |
| 11. solid a. stable b. unsound | 12. leisurely a. hurriedly b. slowly |
| 13. injurious a. beneficial b. pernicious | 14. profuse a. liberal b. scanty |
| 15. aggressively a. combative b. peaceful | 16. purification a. contamination b. cleansing |
| 17. objectionable a. undesirable b. inoffensive | 18. acute a. piercing b. dull |
| 19. efficiency a. inability b. efficacy | 20. suspicious a. doubtful b. trustful |

READING FOR MEANING - LEVEL 11Test 2

Copy the following groups of words on your paper. If the lettered word is a Synonym of the numbered word, write S beside it. If it is an Antonym, write A.

- | | |
|---|--|
| 1. gruff a. agreeable b. curt | 2. maintain a. destroy b. sustain |
| 3. barriers a. hindrances b. helps | 4. transformed a. unaltered b. converted |
| 5. earnestly a. seriously b. insincerely | 6. specializing a. concentrating b. generalizing |
| 7. flexible a. rigid b. pliant | 8. esteemed a. respected b. dishonored |
| 9. abolished a. established b. cancelled | 10. disabled a. restored b. maimed |
| 11. adopted a. rejected b. appropriated | 12. reserved a. retiring b. demonstrative |
| 13. aristocratic a. common b. patrician | 14. controversy a. agreement b. debate |
| 15. impressive a. imposing b. insignificant | 16. capacious a. limited b. ample |
| 17. serious a. grave b. unimportant | 18. thriving a. languishing b. prospering |
| 19. partially a. incompletely b. entirely | 20. deadly a. vital b. fatal |

READING FOR MEANING - LEVEL 11Key Test 1

- | | | | |
|-----|------|-----|------|
| 1. | a. S | 2. | a. A |
| | b. A | | b. S |
| 3. | a. A | 4. | a. S |
| | b. S | | b. A |
| 5. | a. A | 6. | a. A |
| | b. S | | b. S |
| 7. | a. S | 8. | a. S |
| | b. A | | b. A |
| 9. | a. A | 10. | a. A |
| | b. S | | b. S |
| 11. | a. S | 12. | a. A |
| | b. A | | b. S |
| 13. | a. A | 14. | a. S |
| | b. S | | b. A |
| 15. | a. S | 16. | a. A |
| | b. A | | b. S |
| 17. | a. S | 18. | a. S |
| | b. A | | b. A |
| 19. | a. A | 20. | a. S |
| | b. S | | b. A |

Key Test 2

- | | | | |
|-----|------|-----|------|
| 1. | a. A | 2. | a. A |
| | b. S | | b. S |
| 3. | a. S | 4. | a. A |
| | b. A | | b. S |
| 5. | a. S | 6. | a. S |
| | b. A | | b. A |
| 7. | a. A | 8. | a. S |
| | b. S | | b. A |
| 9. | a. A | 10. | a. A |
| | b. S | | b. S |
| 11. | a. A | 12. | a. S |
| | b. S | | b. A |
| 13. | a. A | 14. | a. A |
| | b. S | | b. S |
| 15. | a. S | 16. | a. A |
| | b. A | | b. S |
| 17. | a. S | 18. | a. A |
| | b. A | | b. S |
| 19. | a. S | 20. | a. A |
| | b. A | | b. S |

LEVEL 12

PRELIMINARY UNIT B

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|--------------------------|------------------|
| imagine | conceive | prove |
| foundations | bases | buildings |
| relics | remains | |
| fashionable | stylish | old-fashioned |
| pilot | one who steers | one who misleads |
| ascertained | learned definitely | surmised |
| mystifying | perplexing | enlightening |
| archaeologist | a student of antiquities | |
| expert | skilled | untrained |
| resemblance | similarity | distinction |

UNIT 1

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| realizing | understanding | not aware |
| benefit | advantage | hindrance |
| certified | guaranteed | disproved |
| evidence | confirmation | concealment |
| oath | a solemn declaration | |
| privileges | special rights | obstacles |
| testify | declare under oath | falsify |
| pensions | payments for service | |
| withdrawn | cancelled | offered |
| concerning | relating to | disregarding |

UNIT 2

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| public | all the people | private |
| legends | fables | true stories |
| alternating | taking turns | continual |
| demonstrated | exhibited | not displayed |
| expanded | dilated | contracted |
| species | class | |
| pigment | color | lack of color |
| translucent | letting light through | opaque |
| mammoth | colossal | diminutive |
| emerge | come forth | return |

UNIT 3

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|----------------|
| sound | reliable | defective |
| greedy | grasping | generous |
| pests | plagues | blessings |
| commercial | pertaining to trade | |
| perfect | complete | faulty |
| develop | cultivate the growth | stunt |
| process | procedure | |
| ceased | stopped | started |
| expanded | enlarged | decreased |
| unfortunately | regrettably | happily |

UNIT 4

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| ancient | very old | modern |
| preserving | keeping safe | impairing |
| vast | immense | limited |
| blunt | without a point | sharp |
| existence | being | death |
| remote | distant | adjacent |
| solitary | alone | numerous |
| isolated | segregated | attached |
| submerged | inundated | raised |
| unique | rare | common |

UNIT 5

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| assure | insure | alarm |
| bulk | greater part | minor portion |
| estimated | calculated | conjectured |
| expedition | a journey | |
| dependence | reliance | distrust |
| operate | propel | cease |
| withstand | resist | submit |
| scant | meager | ample |
| conservatively | cautiously | recklessly |
| equivalent | equal | diverse |

UNIT 6

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|-------------------|
| perceiving | observing | overlooking |
| passion | intense feeling | apathy |
| compounded | mixed | simple |
| derive | originate | apply |
| filter | strain | |
| canopy | covering | |
| azure | sky blue | |
| emerge | become visible | disappear |
| particles | portions | the entire amount |
| aspects | attributes | |

UNIT 7

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|------------------|
| advanced | presented | withheld |
| authorities | experts | trainees |
| adaptable | capacity to alter | unable to change |
| risks | ventures | calculations |
| adoption | utilization | rejection |
| contributing | adding to | refusing |
| barriers | impediments | openings |
| factor | element | |
| responsibility | obligation | disregard |
| erection | establishment | destruction |

UNIT 8

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|---------------------|------------------|
| doom | destruction | hope |
| privilege | prerogative | disqualification |
| prophets | seers | historians |
| accorded | granted | refused |
| supreme | utmost | least |
| traditions | oral communications | history |
| dictates | demands | acceptances |
| opposition | resistance | agreement |
| indifference | apathy | interest |
| partisan | prejudiced | unbiased |

UNIT 9

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| standing | duration | unenduring |
| progress | advancement | regression |
| exploring | examining | proving |
| major | greater | minor |
| experience | living through | |
| ceases | stops | continues |
| endeavor | try | shirk |
| communicate | convey | suppress |
| civilized | well-mannered | barbarian |
| accumulate | amass | disperse |

UNIT 10

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|-----------------|
| supplied | furnished | retained |
| accompanying | associating with | being alone |
| maintaining | sustaining | abandoning |
| favorable | beneficial | disadvantageous |
| generation | production | reduction |
| moderately | reasonably | extremely |
| achieved | attained | failed |
| investigations | researches | lack of inquiry |
| adjacent | adjoining | remote |
| accumulate | gather | distribute |

UNIT 11

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| purchasing | acquiring | selling |
| virtue | uprightness | vice |
| condemned | denounced | approved |
| concerted | simultaneous | separate |
| corrupts | debases | purifies |
| revive | restore | depress |
| afflicted | troubled | relieved |
| indulge | revel | refuse |
| legitimate | proper | illegal |
| affront | insult | praise |

UNIT 12

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|-----------------|
| preserving | conserving | impairing |
| remarkably | extraordinarily | commonly |
| sources | origins | effects |
| tremendously | enormously | insignificantly |
| earthen | made of soil | |
| secretion | a fluid emitted | |
| abdomen | part of the body | |
| confronted | faced | avoided |
| obtainable | procurable | unattainable |
| perishable | likely to spoil | preserved |

UNIT 13

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| prime | first in rank | last |
| appeal | fascination | lack of charm |
| decade | ten years | |
| shift | transfer | fix |
| transformed | changed | unaltered |
| occasional | once in a while | frequent |
| wedging | squeezing | |
| economic | referring to cost | |
| dwindling | diminishing | expanding |
| languished | dropped | flourished |

UNIT 14

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------------|----------------|
| capes | jutting lands | |
| tide | current | cessation |
| scattered | dispersed | united |
| rampart | bulwark | exposure |
| recently | lately | formerly |
| yields | produces | withholds |
| social | friendly | hostile |
| conveniences | comforts | annoyances |
| clustering | grouping together | scattering |
| immigrants | entrants to a country | emigrants |
| precariously | dangerously | securely |

UNIT 15

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|------------------|------------------|
| gradually | little by little | instantly |
| bulk | greater portion | the smaller part |
| consumed | utilized | unused |
| justified | defended | condemned |
| enforced | compelled | permitted |
| inevitable | unavoidable | doubtful |
| rely | depend | mistrust |
| conservation | preservation | waste |
| synthetic | artificial | natural |
| steadily | constantly | irregularly |

UNIT 16

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| quantities | amounts | deficiencies |
| manufactures | industries | |
| merely | simply | |
| region | area | |
| rival | compete | cooperate |
| routes | courses | wanderings |
| varied | diverse | similar |
| disappointment | thwarted hope | satisfaction |
| fertile | fruitful | sterile |
| location | position | dislocation |

UNIT 17

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| stern | exacting | genial |
| launches | sends out | |
| havens | shelters | exposed places |
| scanty | inadequate | abundant |
| fortified | reenforced | weakened |
| bounteous | munificent | miserly |
| training | discipline | disorder |
| interminable | perpetual | transient |
| devious | circuitous | direct |
| foray | attack | protection |

UNIT 18

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|-------------------|
| thorough | finished | incomplete |
| practical | experienced | unpracticed |
| recently | lately | formerly |
| types | kinds | ones who differ |
| development | growth | restriction |
| approval | commendation | dissatisfaction |
| accuracy | precision | carelessness |
| deficient | defective | adequate |
| recognition | acknowledgement | repudiation |
| dependability | integrity | untrustworthiness |

UNIT 19

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| application | utilization | idleness |
| devoting | consigning | |
| abundant | ample | scanty |
| substantial | tangible | flimsy |
| salvation | hope | despair |
| satisfactory | pleasing | annoying |
| security | safety | exposure |
| abruptly | suddenly | smoothly |
| unprofitable | useless | productive |
| simultaneously | coincidentally | previously |

UNIT 20

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| establish | build | demolish |
| acquaintance | intimate | unknown person |
| confess | admit | deny |
| distinct | explicit | indefinite |
| proposed | intended | |
| reveal | disclose | conceal |
| continuous | unceasing | interrupted |
| justify | defend | disprove |
| observation | accurate watching | inattention |
| presumably | supposedly | surely |

UNIT 21

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------------|-----------------|
| amazing | bewildering | commonplace |
| original | earliest | terminal |
| wilderness | uncultivated regions | inhabited areas |
| decorated | ornamented | unbeautified |
| surviving | enduring | ceasing to be |
| astounded | astonished | expected |
| crowded | crammed | empty |
| teeming | swarming | scant |
| gaily | merrily | solemnly |
| stunned | shocked | not surprised |

UNIT 22

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-----------------|----------------|
| magnificent | imposing | unimpressive |
| private | personal | public |
| varied | diversified | unaltered |
| acquired | procured | forfeited |
| authority | power | obedience |
| effect | result | cause |
| parliament | law making body | constituent |
| vistas | views | obstructions |
| dwelling | residence | |
| demolished | razed | erected |

UNIT 23

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|-------------------|----------------|
| clever | intelligent | dull |
| principles | rules of behavior | lack of morals |
| repair | restoration | destruction |
| opinion | belief | knowledge |
| stubborn | obstinate | docile |
| substitute | replace | |
| evidence | testimony | concealment |
| deliberately | purposely | irresolutely |
| accuracy | exactness | faultiness |
| courageously | valiantly | timidly |

UNIT 24

| <u>Key Word</u> | <u>Synonym</u> | <u>Antonym</u> |
|-----------------|----------------|----------------|
| compounds | mixtures | elements |
| shields | protects | exposes |
| convert | transform | divert |
| imprisons | confines | liberates |
| violence | fury | calm |
| dramatically | vividly | dimly |
| evolution | development | dissolution |
| maximum | greatest | minimum |
| stupendous | enormous | unimposing |
| intricate | complicated | simple |

READING FOR MEANING - LEVEL 12Test 1

Divide your paper into three columns: Word, Synonym, Antonym. Put the lettered words into the first column. From the list of numbered words choose a Synonym and an Antonym and put them into the correct column beside each numbered word.

Notice that the Synonyms and Antonyms are scrambled.

| | | |
|-------------------|-----------------|---------------------|
| a. mystifying | 1. diminishing | 21. dilated |
| b. expert | 2. enormously | 22. perplexing |
| c. expanded | 3. vice | 23. interest |
| d. mammoth | 4. unbiased | 24. prejudiced |
| e. greedy | 5. cautiously | 25. amass |
| f. progress | 6. adjacent | 26. avoided |
| g. remote | 7. regression | 27. attained |
| h. unique | 8. grasping | 28. diminutive |
| i. conservatively | 9. enlightening | 29. insignificantly |
| j. opposition | 10. colossal | 30. generous |
| k. indifference | 11. distant | 31. skilled |
| l. partisan | 12. common | 32. faced |
| m. accumulate | 13. contracted | 33. expanding |
| n. achieved | 14. resistance | 34. untrained |
| o. virtue | 15. disperse | 35. procurable |
| p. condemned | 16. recklessly | 36. failed |
| q. tremendously | 17. agreement | 37. approved |
| r. confronted | 18. advancement | 38. unattainable |
| s. obtainable | 19. rare | 39. denounced |
| t. dwindling | 20. apathy | 40. uprightness |

READING FOR MEANING - LEVEL 12Test 2

Divide your paper into three columns: Word, Synonym, Antonym. Put the lettered words into the first column. From the list of numbered words choose a Synonym and an Antonym and put them into the correct column beside each numbered word.

Notice that the Synonyms and Antonyms are scrambled.

| | | |
|-----------------|----------------|------------------|
| a. intricate | 1. compelled | 21. indefinite |
| b. imprisons | 2. sterile | 22. razed |
| c. shields | 3. deny | 23. obstinate |
| d. compounds | 4. procured | 24. forfeited |
| e. courageously | 5. docile | 25. preservation |
| f. stubborn | 6. artificial | 26. distinction |
| g. demolished | 7. circuitous | 27. liberates |
| h. acquired | 8. complicated | 28. erected |
| i. magnificent | 9. explicit | 29. elements |
| j. reveal | 10. permitted | 30. disclose |
| k. distinct | 11. natural | 31. protects |
| l. confess | 12. simple | 32. unimpressive |
| m. resemblance | 13. similarity | 33. conceal |
| n. devious | 14. timidly | 34. waste |
| o. bounteous | 15. confines | 35. munificent |
| p. fertile | 16. direct | 36. mixtures |
| q. synthetic | 17. fruitful | 37. concealment |
| r. conservation | 18. exposes | 38. miserly |
| s. enforced | 19. imposing | 39. admit |
| t. evidence | 20. valiantly | 40. testimony |

READING FOR MEANING - LEVEL 12

| <u>Word</u> | <u>Key Test 1</u> | | <u>Word</u> | <u>Key Test 2</u> | |
|-------------|-------------------|----------------|-------------|-------------------|----------------|
| | <u>Synonym</u> | <u>Antonym</u> | | <u>Synonym</u> | <u>Antonym</u> |
| a. | 22. | 9. | a. | 8. | 12. |
| b. | 31. | 34. | b. | 15. | 27. |
| c. | 21. | 13. | c. | 31. | 18. |
| d. | 10. | 28. | d. | 36. | 29. |
| e. | 8. | 30. | e. | 20. | 14. |
| f. | 18. | 7. | f. | 23. | 5. |
| g. | 11. | 6. | g. | 22. | 28. |
| h. | 19. | 12. | h. | 4. | 24. |
| i. | 5. | 16. | i. | 19. | 32. |
| j. | 14. | 17. | j. | 30. | 33. |
| k. | 20. | 23. | k. | 9. | 21. |
| l. | 24. | 4. | l. | 39. | 3. |
| m. | 25. | 15. | m. | 13. | 26. |
| n. | 27. | 36. | n. | 7. | 16. |
| o. | 40. | 3. | o. | 35. | 38. |
| p. | 39. | 37. | p. | 17. | 2. |
| q. | 2. | 29. | q. | 6. | 11. |
| r. | 32. | 26. | r. | 25. | 34. |
| s. | 35. | 38. | s. | 1. | 10. |
| t. | 1. | 33. | t. | 40. | 37. |