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A comparison of the difficulty of the earlier and recent editions of several standardized reading tests

Mary Jovita Meirick

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**A COMPARISON OF THE DIFFICULTY OF THE
EARLIER AND RECENT EDITIONS OF SEVERAL
STANDARDIZED READING TESTS**

by

Sister Mary Jovita Meirick, R.S.M.

**A DISSERTATION
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION (READING SPECIALIST)
AT THE CARDINAL STRITCH COLLEGE**

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CHAPTER I

THE PROBLEM

As changes take place in society, so also education must change. The growth of education in the United States during the first half of the twentieth century was more conspicuous than in any other period of the nation's history. Since reading is fundamental to most school subjects, research directs attention to this process, and considers it the basic when measuring growth in education. Nila Smith claims that "the scientific movement in education emerged between 1910 and 1920." It was during this time that standardized reading tests appeared for the first time.¹ Since 1910 hundreds of tests have been published for the measurement of reading ability. Some of these met with success for a time, but others were given very little use.

Standardized tests have been used by the Bureau of Educational Research of the New York City Board of Education since the 1920's in all phases of education. Lazar and Aronow point out that "Research, supervisory, and administration personnel use tests in two general ways: (1) in connection with

¹Nila Benton Smith, "An Evaluation of Reading in American Schools", International Reading Association Conference Proceedings, Vol. VII (New York: Scholastic Magazines, 1962), p. 186.

surveys of the school population; and (2) in connection with experimentation."²

The comparison of the reading achievement of pupils now with the reading achievement of pupils of years ago has been the subject for a number of research studies. Traxler and Townsend state:

Partly because of widespread attacks upon modern schools by citizens' groups and others for alleged failure to teach the basic skills, a good deal has been published in educational journals and the public press in recent years relative to the achievement of pupils today as compared with that of pupils who were in school in earlier years. Some of this writing has been emotionally defensive of present-day schools, but somewhat short of facts. However, a considerable number of articles attempted to view objectively the question of progress in teaching reading and other basic skills.³

They continue by explaining that it is difficult to obtain results of reading tests for pupils who were examined twenty or thirty years ago. Less testing was done and fewer records were kept of tests then except in the case of a limited number of schools. If it is possible to obtain the old form of a test, Traxler and Townsend contend that "the test items may be so far out of step with modern curriculum that they will be of little or no use in evaluating present-day achievement."⁴

²May Lazar and Miriam Aronow, "Research Uses of Testing Programs", Education, LXXVII (March, 1957), p. 395.

³Arthur E. Traxler, and Agatha Townsend, Eight More Years of Research in Reading: Educational Records Bulletin, No. 64 (New York: Educational Records Bureau, January, 1955), p. 95.

⁴Ibid., p. 97.

Statement of the Problem

The writer feels that the findings of this study would contribute to information already available in this area of research in reading. The problem of this study is to make a comparison of the earliest available editions and the most recent editions of several standardized reading tests. It was to ascertain whether or not there are significant differences between performances on the earlier and more recent editions of the Stanford Reading Test, and between performances on the earlier and recent editions of the Metropolitan Reading Test.

Specific purposes of this research are as follows:

1. Are present reading tests more difficult than early editions?
2. How do children achieve on present day tests in comparison with early editions?
3. How do the results from this group of Cedar Rapids children compare with national norms of earlier and later dates?
4. Are children better in reading today than they were ten or twenty years ago?

Scope and Limitations of the Study

The population of 234 children enrolled in the sixth grade of four parochial schools in Cedar Rapids, Iowa, were the subjects for this study. The children ranged in levels

from below average to above average intelligence.

In order to have a twenty-five year span between the earlier and recent editions of tests, only the Metropolitan Reading Test and the Stanford Reading Test were available. This may be a limiting factor.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

There are relatively few studies in the field of educational literature that are directed toward the difficulty of various editions of standardized reading tests. Therefore, the writer has devoted this chapter extensively to the problem of reading achievement as it appears in American schools today as compared to that of a quarter of a century ago.

Society keeps a critical eye on education. Reading, considered as a tool for learning as well as a subject of instruction, has been a vital concern for many years. It is to be expected that parents become anxious regarding their child's development of the reading skills that he will need to meet successfully the needs of our age. It is the opinion of some that reading in father's or grandfather's day was taught better than it is today. Arthur I. Gates says,

Indeed, certain critics in education have declared, with pompous confidence, that today's youngsters at all educational levels read less well now than the youth of a generation ago. The evidence presented in support of this declaration is typically negligible, usually a subjective opinion based on casual observation of a limited population, and thus likely to be wholly unreliable.⁵

⁵Arthur I. Gates, Reading Attainment in Elementary Schools: 1957 and 1937 (New York: Teachers College, Columbia University, 1961), p. 1.

The history of American reading instruction shows that there have been successive periods in which certain methods were carried to extremes. The Phonics Method and the Word Method were the systems tried most often. "Research in reading is becoming the basis for determining change," wrote Caldwell.⁶ Extensive investigations of the various methods by authorities during the past century have shown that reading is a complex procedure and that it is necessary to utilize a variety or a combination of methods to accomplish the task. Caldwell further explained,

Children react differently to similar methods. No method produces the same results in all situations and with all children. Methods are constantly being adapted to meet the needs of each child's particular background, abilities and interests. Methods are selected to meet the particular needs of the language, the situation and the community in which it is used.⁷

The development of the standardized reading test was a great contribution to research in education, as revealed by Gray:

Reading is now understood more fully and is taught better than at any time in history. This progress was made possible by understandings resulting from a theory of general ability to read and from the availability of tests designed to measure this general ability.⁸

⁶Muriel A. Caldwell, "A Survey of Methods of Beginning Instruction in Reading from 1900 to 1950" (unpublished Master's dissertation, University of Alberta, 1959), p. 264.

⁷Ibid., 265-266.

⁸William S. Gray, Improving Reading in all Curriculum Areas "Supplementary Educational Monographs," No. 76: (Chicago, Ill.: University of Chicago Press, 1952), p. 1.

The statistics that show gains in reading achievement today over results of twenty-five years ago are from the Office of Education in Washington, D.C. They reported the number of pupils having reading disabilities as constituting sixteen per cent of the total. Nila Smith reported this finding and compared it with that of earlier times as follows:

Going backward for a moment we find in the Twenty-Fourth Yearbook of the National Society for the Study of Education published in 1925 this report: "Statistical Studies make it evident that something over thirty-five per cent of the children (tested in 1924) are educationally retarded." If they were 'educationally retarded' we may be pretty sure that they were't reading well.⁹

Reading Achievement--Then and Now

The controversial issue of whether or not children read better today than they did yesterday has attracted many investigators. It is the general consensus that reading is being taught better, materials are more abundant, and, as a result, children tend to be better readers now; but the evidence of research is scarce, and it seems that it will necessarily remain so. Traxler and Jungeblut stated, "This is necessarily the situation, for very seldom are the results of tests administered twenty, thirty, or forty years ago directly

⁹Nila Banton Smith, An Evaluation of Reading in American Schools, Vol. 7 of International Reading Association Conference Proceedings: Challenge and Experiment in Reading, ed. J. Allen Figure 1 (New York: Scholastic Magazines, 1962), p. 188.

comparable with the results of tests now used in the schools."¹⁰ Gates explained that in order to make such a comparison exactly and reliably it would be necessary to consider differences in characteristics such as the following:

- (1) the general intelligence or scholastic aptitude of the pupils;
- (2) the average chronological age at the various grade levels;
- (3) the average number of years spent in school after entering the first grade;
- (4) the number of children repeating each grade;
- (5) the number dropping out of school at each grade level;
- (6) the nature and relative difficulty of the material in the old and new editions of the reading tests;
- (7) the equivalence of scores on the old and the new tests; and
- (8) other factors such as the economic and educational status of the parents, the educational climate, and types of recreational and other incentives operating in the home and community.¹¹

In the light of these limitations, or in spite of them, some experiments have been conducted in this area in order to make available the best possible results of research in the subject area of reading and its place in today's curriculum.

As early as 1919, Caldwell and Curtis used the Boston Tests which had also been administered in 1845. It could be seen from this study that the type of education had changed. However, in 1845 the children tested scored higher on the memory and skill questions, while the children tested in 1919 excelled in the areas of thinking and application skills.

¹⁰Arthur E. Traxler and Ann Jungleblut, Research in Reading During Another Four Years, ("Educational Records Bulletin," No. 75; New York: Education Records Bureau, 1960), pp. 83-84.

¹¹Gates I, 2.

There was a definite indication from the comparison that there was an improvement of instruction, but the authors of 1919 did not consider this improvement satisfactory.¹²

As time went on, new methods of experimentation were conducted in the hope that a better way may be found to help children achieve to the best of their abilities. In 1941 Baker, Travers, et al. stressed the fact that too many school systems cling to the "methods sanctioned by tradition" while reading habits suffer. They endorsed such experiments in a spirit of progress. "Changes in practice have been possible because of the democratic local control of education," they said. "It is one of the characteristics of the American educational system that is not controlled by a central authority which prescribes what shall be taught and how it shall be taught."¹³

These authors cited two studies made to compare old and new methods of teaching reading. In the first the Stanford Achievement Examinations were used in the schools of Santa Monica, California, to compare the achievement of elementary school children in 1927 and again in 1939, i.e., before and after the modernization of curriculum and method. The results of the testing program showed that the children tested in 1939

¹²Otis W. Caldwell and Stuart A. Curtis, Then and Now in Education 1845:1923 (New York: World Book Company, 1925), pp. 85-97.

¹³G. Derwood Baker et al., New Methods vs. Old in American Education (New York: Teachers College, Columbia University, 1941), p. 2.

achieved higher than those in 1927, when traditional methods had been used.¹⁴

A study of records by Baker, et al., was made in Los Angeles where data in measuring the mastery of skills under traditional and modern methods of teaching was supplied by the Division of Educational Research and Guidance. The achievement of elementary pupils of 1924 was compared with that of pupils in 1939. During this period the schools of Los Angeles transferred their methods to conform with modern practices. "The evidence showed that the reading ability of Los Angeles children when they leave the elementary school is much better developed under the newer methods than it was formerly."¹⁵

Another researcher, Muriel A. Caldwell, made a survey of methods of beginning instruction in reading from 1900 to 1950. She drew six important conclusions: (1) Different methods achieve different results; (2) Recognition of the contributions of educational research to changes in methodology is evident; (3) Changes in reading methods based on these findings often develop very slowly; (4) Changes in emphasis and materials in reading instruction have occurred frequently; (5) The demands of society influence changes in methods;

¹⁴G. Derwood Baker et al., New Methods vs. Old in American Education (New York: Teachers College, Columbia University, 1941), p. 25-26.

¹⁵Ibid., p. 29.

(6) Extremes in methodology are dangerous.¹⁶

Burke and Anderson took great care to obtain homogeneous groups with respect to intelligence for their comparative study of pupils' achievement in 1939 and 1950. Scores on the old form of the Metropolitan Achievement Test were used for 162 children in 1939, and scores on the new form of the same test were used for 216 children in 1950. Children from grades one to six were included from the Hawthorne School, Ottawa, Kansas. The investigators reported:

The final results showed that pupils in 1950 achieved as much as, or in a few subjects, more than did the pupils in the 1939 group. However, where there was found to be a statistically significant difference in mean grade equivalents between the two groups, 1939 and 1950. It was in the majority of cases in favor of the 1939 group.¹⁷

It is interesting to note what Traxler and Jungeblut said about this close relationship of scores:

It will be observed that the time interval between the two administrations of the Metropolitan was only eleven years and that the earlier testing took place at a time when a good many schools were already under fire from the public for alleged weakness in teaching reading.¹⁸

Pilot studies were conducted by Miller and Lanton in the public schools of Evanston, Illinois, during 1952, 1953,

¹⁶Muriel A. Caldwell, "A Survey of Methods of Beginning Instruction in Reading from 1900 to 1950" (unpublished Master's dissertation, University of Alberta, 1959), p. 263.

¹⁷Norris F. Burke and Kenneth E. Anderson, "A Comparative Study of 1939 and 1950 Achievement Test Results in the Hawthorne Elementary School in Ottawa, Kansas", Journal of Educational Research, XLVII (September, 1953), p. 32.

¹⁸Traxler and Jungeblut, loc. cit., p. 84.

and 1954. Reading comparisons from the 1929 edition of the New Stanford Achievement were used for the fourth grade pilot study from the years 1932 and 1952. Two levels of the 1933 edition of the Metropolitan Achievement Test were used for the third and fifth-grade pupils of 1934 and 1953. The 1933 edition of the New Stanford Achievement Test was selected for comparing eighth-grade achievement for the years 1933 and 1954. The variable of teacher-administered tests was excluded by the fact that tests twenty years ago, as well as today, were given by the Research and Testing Department. According to these related findings, present-day pupils "read with more comprehension and understanding the meaning of words better than did children who were enrolled in the same grades and schools more than two decades ago."¹⁹ A report on the above pilot study of 1934 and 1953, published by the research division of the National Education Association, states that

When the girls' and boys' scores were combined, the results were significantly favorable to the 1953 children 7 out of 9 times on these specific items: reading completion, paragraph meaning, vocabulary, average reading, arithmetic problems, spelling, and composite achievement.²⁰

Achievement in oral reading is not as high as in

¹⁹V.V. Miller and W.C. Lanton, "Reading Achievement of School Children Then and Now" Elementary English, XXXIII (February, 1965), p. 96.

²⁰National Education Association Research Division, The "Past-Present" Achievement of Evanston School Children, A summary of Doctor's thesis of Wendell C. Lanton (Washington D.C. National Education Association of the United States, 1954), p. 7.

former years because of the emphasis placed at present on silent reading, since silent reading is used to a greater extent in a child's school work as well as for his personal needs. In a review of studies, Gray compares the achievement of pupils then and now and makes this conclusion as to silent reading. "Achievement in silent reading is equal to, and appears on the average, to be somewhat greater than the achievement of several decades ago."²¹

A comparison of the silent reading ability of sixth grade girls in 1944 and 1958 was made by Anna J. Reed. The Otis Beta: Form B Intelligence Test and the Iowa Silent Reading Test: Form Am were administered to 90 girls in 1944 and to 126 girls in 1958 who attended the Dubuque, Iowa public schools. It was concluded from this study that intelligence test scores did not show any significant difference. Achievement was higher in 1958, marking a significant difference of 5.48 as a critical ratio.²²

When he established norms for the four batteries of the 1957 Gates Reading Tests, Arthur I. Gates also compared

²¹Wm. S. Gray and Wm. J. Iverson, "Current Status of Reading Instruction", The Elementary School Journal, LIII (September, 1952), p. 24.

²²Anna Jane Reed, "A Comparison of the Silent Reading Ability of the Sixth Grade Girls of the Year 1944 with the Silent Reading Ability of the Sixth Grade Girls of the Year 1958 in the Dubuque Community School District", (unpublished Master's dissertation, Catholic University of America Library, 1959), pp. 10-13.

the reading attainments from the 1957 group with those measured for the same purpose in 1937. He found the following:

The norms for 1937 were based on a school population of approximately 107,000 children; those for 1957 on about 31,000, each of whom was given two or more tests. The total number of test records obtained was approximately a half million in 1937 and 105,000 in 1957. At both times the pupils tested as the standardization population were selected to be geographically, economically, intellectually and educationally representative of the United States at large.²³

The number of variables that arise when such an extensive study is being conducted is appreciated by referring to the list of differences in characteristics which the writer has already quoted from the above study by Gates. Having taken into consideration the many factors involved and realizing that it is practically impossible to determine exactly the gains in achievement that the 1957 group has over the 1937 group, Gates came to the conclusion that it was probable that the reading ability of the 1957 group could very well be greater than the test results showed. He stated,

The conservative estimate is that today's children achieve, after about five years of attendance in the elementary a level of reading ability that is at the very best better than a half year in advance of the attainment of pupils of equivalent intelligence, age, and other related factors twenty years ago.²⁴

Although investigations show some improvement in the reading achievement of today's children over those of some

²³Arthur I. Gates, Reading Attainment in Elementary Schools: 1957 and 1937 (New York: Teachers College, Columbia University, 1961), p. 2.

²⁴Ibid., 21-22.

twenty or thirty years ago, educators show in their writings an unrest regarding the reading performance of American children. This is evident by Wallace Ramsey's investigation to determine the reading status of Kentucky children as indicated by standardized reading achievement tests and to make comparisons with national norms. The California Reading Test, the Metropolitan Reading Test and the Stanford Reading Test were given to 29,921 fourth grade pupils and 32,101 eighth grade pupils, representing over 50 percent of the enrollment for these two grades in the public schools of Kentucky. Results showed that the fourth graders were reading up to the national norms, but that the eighth graders were below the national norm and would therefore experience difficulty in high school courses requiring reading ability. Ramsey suggested that more studies of this type be made of the factors (school organization, teaching methods) known to influence achievement." It was his belief that this might be the beginning of changes worthy of the kind of education Americans want for their children.²⁵

Children do more reading in school today than ever before. Emphasis in the upper grades is on purposeful independent reading; however, many pupils fail to develop in reading skills because, too often, they are left to "rely entirely upon incidental learning for further development

²⁵Wallace Ramsey, "The Kentucky Reading Study," The Reading Teacher, XVI (December, 1962), p. 179.

of reading."²⁶ Reading is a thinking process involving many skills and abilities. Just as systematic instruction is necessary for developing skills of structural analysis or phonetic skills, so it is important in developing vocabulary, which is called, by Charles H. Boehm, one of the "two important keys to reading instruction." Closely related to this is another key, namely, "word identification." Boehm contended that teachers who can lead children to express themselves concerning their own experiences are helping them form concepts and build rich vocabularies.²⁷ In discussing the problem of vocabulary in reading, Dale claimed that authors of children's books and magazines could better communicate to their readers if they had greater knowledge of the extent of the vocabulary possessed by their audience. This is what he says:

Certainly, in preparing reading materials for all levels of ability, we need to have information about the experiences, the interests, the needs, the background, the information already possessed by these readers. All suggest the need for vocabulary study. Words, after all, are the deposit of experience--the result of what we have done or are thinking. They are the bearers of meaning--the symbols which represent experience.²⁸

²⁶Albert J. Harris, How to Increase Reading Ability (New York: Longmans Green and Company, 1961), pp. 1-7.

²⁷Charles H. Boehm, "Reading Today for Living in the 1980's," Vol. 8 of International Reading Association Conference Proceedings: Reading as an Intellectual Activity, ed. J. Allen Figure 1 (New York: Scholastic Magazines, 1963), p. 23.

²⁸Edgar Dale, "The Problem of Vocabulary in Reading," Educational Research Bulletin, XXXV (May, 1956), p. 114.

Some studies have been directed specifically toward vocabulary as is the one by Dolch and Leeds who used five tests--the Thorndike, Gates, Durrell-Sullivan, Stanford, and Metropolitan--to find how well vocabulary tests measure children's knowledge of word meaning. From this testing, "It was found that the vocabulary test almost universally used only the first or most common definition of a word, leaving out 1. homonyms, 2. derived meanings, and 3. figurative meanings."²⁹ They concluded that existing vocabulary tests do not do a complete job of measuring vocabulary and claimed that tests should be so constructed that the child be able to tell all he knows about a word.

Rachel S. Sutton conducted an experiment through intensive study of words over a four-month period at the third-grade level to ascertain the improvement of reading ability. This was carried on in 1952 at the University of Georgia Elementary School where 36 children participated. The range of improvement was from 0.8 to 3.7 according to the Durrell-Sullivan Reading Capacity Test and Durrell-Sullivan Reading Achievement Test Form A. This might be an indication of the importance of systematic instruction in vocabulary development.³⁰

It was stated earlier that there has been a neglect

²⁹E.W. Dolch and Don Leeds, "Vocabulary Tests and Depth of Meaning," Journal of Educational Research, XLVII (November, 1953), p. 184.

³⁰Rachel S. Sutton, "The Effect of Vocabulary - Building on Reading Skills," The Elementary School Journal, LIV (October, 1953), pp. 94-97.

of reading skills instruction in some instances in upper grades. A study that bears this out was conducted in the Cleveland public schools by Wozencraft with 564 children in third grade and 603 in sixth grade. She made comparisons between the scores obtained on two traits of the Stanford Achievement Tests, paragraph meaning and word meaning, which showed that "in third grade slow learning children were significantly better at Word Meaning than at Paragraph Meaning. By sixth grade children are better at getting meaning from a paragraph than at selecting the correct word to complete a certain definition."³¹ The valuable part played by vocabulary, or word-knowledge, in the reading act is expressed well by Foran:

It is self-evident that word-knowledge is the core of ability to read. And if reading is a progressive synthesis of the meanings of words, comprehension is reduced by vague and incomplete awareness of meanings. Context may fill part of the gap but the meaning of the whole is found in the meaning of the component words and in their relation to one another.³²

Comprehension, which is considered the essence of reading, has been interpreted in many ways as more knowledge of the whole reading process is gained. Many investigators agree that comprehension does not yield to statistical analysis. "Nevertheless," says Witty, "the use of standardized tests is usually recommended as the most objective and best single

³¹Marion Wozencraft, "Word Meaning Difficulties", Elementary English, XXXXI (January, 1964), p. 46.

³²T. G. Foran, "Vocabulary Tests", Messenger Guide of the Young Catholic Messenger Teachers Edition, LVIII, No. 27 (April, 1964), p.1.

means of measuring achievement and of identifying the retarded."³³ The earliest method of measuring comprehension was by use of "yes or no" and "true or false" items that were too brief to yield a general comprehension score. A single reading test is very limited in the kinds of reading materials that can be tested. According to Traxler,

The more recent tests are longer and generally provide anywhere from three or four to eight or ten different scores. Some of these are not as long as they should be in order to measure reliably as many aspects of reading ability as they are designed to measure.³⁴

Wrightstone, Justman, and Robbins took a more optimistic view of what a reading test does:

Reading is not a unitary ability; it is a combination of component and related abilities and skills. The typical reading test taps many important aspects of reading comprehension. The various items require the child not only to get literal meanings and note direct detail, but also to infer the meanings of words; to see, follow, and infer relationships; to weigh the significance of ideas; to make subtle interpretations; and to draw general conclusions about the content, tone, and purpose of the reading matter.³⁵

Not only a reading achievement test, but also an intelligence test, and other tests, if possible, should be administered when testing to observe the progress made in reading. An interesting study was made by McCracken of 56 sixth grade pupils who were given the California Test of Mental

³³Paul Witty and David Kopel, Reading and the Educative Process (Chicago: Ginn and Company, 1939), p. 67.

³⁴Arthur E. Traxler, "Measurements in the Field of Reading", English Journal, XXXVIII (March, 1959), p. 145.

³⁵J. Wayne Wrightstone, Joseph Justman, and Irving Robbins, Evaluation in Modern Education, (New York: American Gook Company, 1956), p. 248.

Maturity, an informal reading inventory, and the standardized Iowa Tests of Basic Skills reading test. It showed that the pupils were underachieving according to both reading tests, although the standardized reading test rated them two years ahead of the rating by the informal inventory. The tester stated that standardized reading test scores "tend to assign a higher grade level than the informal reading inventory."³⁶

A comparison of an informal reading inventory with three different standardized reading tests was made to find the relationship between the standardized test and the functional reading levels. Edward R. Sipay performed this experiment using the California Reading Test, the Gates Reading Survey, and the Metropolitan Reading Tests and found that all three tests overestimated the instructional level by one or two grades when the more stringent criteria for ascertaining grade levels on the informal inventory was used. At the criteria 90 instructional level which consists of a 90-95 percent accurate word pronunciation and a 60 percent minimum comprehension, the Metropolitan Reading Test fell within that range. Sipay wrote that it is "impossible to generalize as to whether standardized reading achievement test scores tend to indicate the instructional or frustration level."³⁷ One must consider the standardized

³⁶R. A. McCracken, "Standardized Reading Tests and Informal Reading Inventories," Education, LXXXII (February, 1962), p. 369.

³⁷Edward R. Sipay, "A Comparison of Standardized Reading Scores and Functional Reading Levels," The Reading Teacher, XVII (January, 1964), p. 268.

test that is being used, as well as the informal reading inventory used, and also the criteria employed to estimate functional reading levels.

"Changes in society determine change in education."
"Scientific Movement in Education!" "Those who think, read! Those who read, think!" "What Ivan Knows That Johnny Doesn't" These and other like expressions cause consternation of varying degrees in the minds of educators today. They also start the spark of criticism from some unqualified laymen. In view of the earnest efforts of the experts to find the solution to the seemingly ever-present problem of poor readers in American schools, it is imperative to take into consideration the many and separate phases in reading growth. Research in reading gives credit to the progress that has been made, but nowhere to the writer's knowledge is it stated that the answers have been found, and success is achieved. Rather, as times change, reading trends must ever move forward. Bond and Tinker, in reviewing the various teaching methods since 1900, said, "Throughout these years actual classroom practice in reading has lagged behind the kind of reading instruction considered desirable in terms of current needs. Many schools are 50 years behind the currently defined needs."³⁸

³⁸Guy L. Bond and Miles A. Tinker, Reading Difficulties Their Diagnosis and Correction, (New York: Appleton-Century-Crofts, Incorporated, 1957), p. 28.

Standardized Reading Tests--Then and Now

The true worth of education is in promoting the development of the potential within the individuals. This is best accomplished by knowing the individual and the extent of his capabilities. Much of this information is obtained through evaluation. Evaluation in the form of standardized tests has played an important part in education. Lazar and Aronow confirmed this: "Standardized tests spurred the twentieth-century scientific movement in education."³⁹ Many changes that have taken place in the area of school instruction were dependent in some way upon the use of tests. A good testing program that is effectively utilized is a valuable contribution to school improvement as well as to the guidance to the individual in developing according to the best of his abilities.

With this scientific movement in education came a vast amount of experimenting of ideas. Mort and Cornell explained that "As a result, textbooks were rewritten, courses modified, change in emphasis given to various aspects of the tool subjects, and there emerged a great variety of tests designed to measure the results of instruction."⁴⁰ According to them, a serious conflict arose in the 1920's between the testing

³⁹May Lazar and Miriam Aronow, "Research Uses of Testing Programs", Education, LXXVII (March, 1957), p. 397.

⁴⁰Paul R. Mort and Francis G. Cornell, American Schools in Transition, (New York: Teachers College, Columbia University, 1941), p. 4.

movement and the curriculum reform, because the people responsible for constructing the tests did not keep abreast of new developments in the curriculum. At the same time, curriculum designers were too busy with their own tasks to be concerned with test-making. It was not until the 1930's that an integration of these two movements was apparent.

There may be some basis today for belief that test-makers will dictate the curriculum, but no need for anxiety. A standardized test will evidently influence teaching to some extent, but if the test is constructed by experts, that influence should be beneficial. Ebel was of the opinion that "if the test-makers try, as many of them do, to catch and reflect in their tests a consensus of the judgment of curriculum specialists, it seems unreasonable to charge them with attempting to dictate curriculum developments."⁴¹ Lindquist seemed to agree when he said,

The content of a general achievement test does not describe what should be taught -- it describes only that part of what should be achieved. It is, in a sense, a picture of the present status, not of the desired status of achievement. The general achievement test is purely a measuring instrument, not a teaching instrument.⁴²

Although this statement was directed to the general achievement test, it seems reasonable that the reading test would be included.

⁴¹Robert L. Ebel, "Standardized Achievement Tests - Uses and Limitations", National Elementary Principal, VLI (September, 1961), p. 31.

⁴²E. F. Lindquist, "The Technique of Constructing Tests", Educational Record, XV (January, 1934), p. 84.

The procedure for constructing reading achievement tests is a very technical one, just as that for constructing any other standardized test. Committees composed of test specialists and subject-matter specialists are organized to study the objectives and content of many different textbooks and curricula. Traxler explained that after objectives are approved and submitted for criticism,

About twice as many items or questions are written as will be needed. These are then tried out with a large sample of pupils, and the difficulty and validity of the items are calculated in accordance with well-defined statistical procedure.⁴³

Baker wrote that "the developer must experiment with item content, item order, the scoring scheme, various groups of subjects and various criteria of measures."⁴⁴ After the final forms are assembled they are administered to a representative population which would consist of thousands of pupils in order that norms might be established. Traxler explains further that "extensive studies are then made of the reliability, intercorrelation, predictive value, and validity of the test scores."⁴⁵ These studies are conducted by test-makers themselves.

Private research workers from time to time investigate a particular test for their own reasons and to contribute to

⁴³Arthur E. Traxler, "Standardized Tests", National Education Association Journal, VLVIII (November, 1959), p. 19.

⁴⁴T. B. Baker, "Generalized Item and Test Analysis Program", Educational and Psychological Measurement, XXIII (Spring, 1963), p. 187.

⁴⁵Traxler, VLVIII, 20.

the field of education. James wished to determine the reliability of the California Test of Mental Maturity--Elementary Series and the Metropolitan Achievement Test--Form R. She gave the California test to 114 fourth graders and the Metropolitan test to 137 fourth graders of two elementary schools for Negroes in Petersburg, Virginia. She stated:

The coefficient of reliability was calculated for each section of the California Test of Mental Maturity and for each sub-test of the Metropolitan Achievement Test by the so-called split-test or comparable halves method. The coefficients of reliability of the sub-tests of the Metropolitan Achievement Test were generally lower than the coefficients of reliability for the California Test of Mental Maturity. The differences between the coefficients of reliability reported in the Manual of Directions accompanying the Metropolitan Achievement Test and those obtained in the study were statistically significant.⁴⁶

Another study by Barry was for the purpose of comparing the Metropolitan Achievement Test--Elementary Form R and the ITBS Form 2 to determine how differently they measure achievement. The Otis Quick-Scoring Mental Ability Test also was used in this study comprising 235 children from the fourth grade of a typical New England town in the school year 1957-58. The results of the scores on the sub-tests were compared statistically:

The study indicated that the Metropolitan Achievement Test and the ITBS are comparable in their measurement, and that the group as a whole found the Metropolitan Test less difficult to take. Results also indicated that the proportion of high achievers is consistently larger on the Metropolitan subtests. The proportion of low achievers

⁴⁶Lucy Newkirk James, "The Reliability of Two Standardized Tests in a Group of Fourth Grade Pupils", (unpublished Master's dissertation, Virginia State College, 1953), pp. 24-25

is consistently larger on the Iowa sub-tests.⁴⁷

Research is constantly being conducted in the area of validity, reliability, factor analysis, and response set which Ludlow in 1953 claimed "has produced results which will surely improve the science of test construction. However, one cannot resist speculating whether these statistical considerations have outrun the quality of the test themselves."⁴⁸ Baker, in 1963, reviewed the Generalized Item and Test Analysis Program that was designed "to provide the test developer and consumer with a means of easily analyzing the instrument as a whole as well as each of the items constituting the instruments."⁴⁹ This shows how experts in the field of testing are constantly striving to keep the best possible instruments available. Chauncey considered this art of preparing achievement test questions as an indication of progress saying: "The trend has been away from tests with purely factual questions to those with questions that require students to reason, to use data provided, and to apply their factual knowledge to the solution of new problems."⁵⁰

⁴⁷Barbara A. Barry, "A Comparison of the Metropolitan Achievement Test and the I.T.B.S. in Grade Four in a Typical New England Town", (unpublished Master's dissertation, Boston University, 1958), p. 68.

⁴⁸Herbert Glenn Ludlow, "Trends and Issues in Standardized Testing", Journal of Educational Research, XLVII (December, 1953), p. 283.

⁴⁹Baker, XXIII, 187.

⁵⁰Henry Chauncey, Testing in Perspective and Context, Report of the President, Educational Testing Service, Annual Report 1960-61, (Princeton, New Jersey: Educational Testing Service, 1961), p. 32.

As was stated earlier, the first few decades of the twentieth century witnessed a struggle on the part of test-makers to offer educators an adequate variety of tests. This was pointed out by Witham who recorded that of the 110 American reading tests found on the market, approximately 57% of them were published since 1940, and only 46% have been revised since 1950. In some cases only the format was changed but content remained the same.⁵¹ It is the consensus that tests should be revised every ten years in order to keep them up to date, but, because of costs, few test publishers are able to accomplish this task.

Writers differ in their opinion about what a test of reading ability measures. Lennon, who made a review of history and research of many tests, found reading tests to yield measurement on seventy or eighty different skills. He suggests that these skills might be placed in divisions as follows:

It would seem that we may recognize and hope to measure reliably the following components of reading ability: (1) a general verbal factor, (2) comprehension of explicitly stated material, (3) comprehension of implicit or latent meaning, and (4) an element that might be termed "appreciation".⁵²

Gates, in a study of 18 tests for silent reading, 3 for oral reading, and 6 for word-knowledge in 1921, recognized, even then, that progress was being made in the testing field.

⁵¹Anthony P. Witham (ed.), "The Index to Reading Material: Tests in Reading", Elementary English, XXXX (March, 1963), p. 320.

⁵²Robert T. Lennon, "What Can Be Measured?", Reading Teacher, XV (March, 1962), p. 333.

It was the opinion of many that in some tests coming onto the market at that time an improvement could be seen, over tests of earlier times. However, Gates made a plea for tests with greater perfection in these words:

Reading is a function which can be profitably measured and in which rate and comprehension can be differentiated, although most of our tests do not do so. The present tests are useful, but not perfect instruments. We need tests constructed with such care that the numerous defects found in the tests now in existence shall be avoided.⁵³

Reading tests under the name of achievement and aptitude are listed as survey tests and comprise 61% of all reading tests, as calculated by Witham. This is the type of test, in his opinion, that is most familiar to the teacher of reading because its purpose is to present a fairly accurate measure of the level of difficulty at which a pupil can read.⁵⁴

Chauncey agreed that the objective in administering achievement or aptitude tests is to obtain the measure of a student's ability and knowledge. He adds that "the larger the sample, the more representative the sample, and the better the individual questions, the better the test will be."⁵⁵

A reading test referred to as a survey instrument measures group achievement and uncovers group weaknesses. This

⁵³Arthur I. Gates, "An Experimental and Statistical Study of Reading and Reading Tests", Journal of Educational Psychology, XII (September, October, November, 1921), p. 4464.

⁵⁴Witham, XXXX, 320.

⁵⁵Chauncey, 21.

type of test is used in many school systems as an aid in determining curricular revision, teaching emphasis, or school standing. Schools have set up testing programs whereby systematic testing is conducted periodically. Standardized tests were required by the state of California for the first time in 1963. Magnuson and Gipe claim that "the central purpose of the state testing program is to improve the quality and appropriateness of instruction offered in the public schools."⁵⁶

There are some weaknesses or limitations in tests and testing that should be considered in a review of this kind. No test situation is a normal situation, and above all is this true for a reading test. The time element may cause a pressure resulting in over-achievement or else cause undue tension frustrating the testee. The amount of interest or desire would be lacking to furnish sufficient motivation.

Tests requiring written responses limit the validity of the tests because a skill other than reading is called for. This requirement is found more frequently in older editions of standardized tests.

Scores on any test are said to be "approximations of the true or actual achievement rather than exact or completely accurate indications."⁵⁷ Error in measurement, to a greater

⁵⁶H. W. Magnuson and M. W. Gipe, "Tests for Today", California Teachers Association Journal, LIX(January, 1963), p. 5.

⁵⁷Emery P. Bliesmer, "Using and Interpreting, Achievement Test Results", Education, LXXVII (March, 1957), p. 394.

or less degree, is expected on the best of tests. The error may originate from the test, the testee, or the examiner. Also, in regard to scores, it is found that those listed above the top and below the bottom scores do not extend far enough and are considered unreliable.

Either great value can result from a testing program, or such a program can be a useless performance, depending upon what happens after the testing is over. The test results can be used, abused, or simply recorded and not used. It is a deplorable thing when the latter takes place, because so much knowledge could be gained through these scores for the improvement of the individual. Furthermore, misinterpretation of test data is an abuse of the test instrument and an injustice to all concerned. It is the responsibility of administrators to know their instrument and of teachers to obtain the information needed in order to glean from reading tests all that is possible. MacMinn expressed his opinion of the use of tests in this way: "The importance and usefulness of tests in evaluation and teaching cannot be overestimated."⁵⁸

Quite a critical position was taken by Curtiss Ramsey, who, in 1960, was taking part in an extensive research project in four states in which the uses of standardized tests by school systems was being examined. He predicted that most of the standardized tests of today will not be at all appropriate for use

⁵⁸Paul MacMinn, "A Few Basic Facts About Tests", School Life, XLII (September, 1959), p. 5.

in the schools of 1985 because of their grave deficiencies. He claimed that test designers and publishers of a well-known achievement test admit, privately, that they have no definite purpose for choosing the particular items included in the test. Also, Ramsey reported that a number of popular achievement tests are very lacking in their analyses of curricular achievement, and yet they are being widely used for studying the achievement of school systems. Another contention of his was that "most of the recently standardized tests have been constructed according to outmoded organizational patterns, and cannot efficiently be used with our modern electronic data processing equipment."⁵⁹ What response this article will arouse from authorities in the field of educational testing remains to be seen.

Having considered some of the weaknesses of standardized reading tests, knowing that the experts themselves are constantly striving to provide better instruments, and being witness to harsh criticism of them, one finds it only proper to emphasize some of the strong points of these tests. Scores on a standardized test, as well as on a teacher-made test, represent a highly objective form of information. Authors of standardized tests usually are skilled in writing items. The items are also pretested, discriminated, and given adequate

⁵⁹Curtis Paul Ramsey, "Testing in Tomorrow's School", Educational Leadership, XVII (May, 1960), p. 506.

balance so that a teacher can judge a pupil with more confidence than from hand-made tests or from a merely subjective basis.

High reliability rating of a standardized reading test gives adequate confidence that scores on that test are highly accurate measure of the achievement manifested thereby.

Another contribution of standardized achievement tests which proves to be valuable is its provision of national, regional, or state-wide norms. Ebel in describing standardized tests said, "These norms enable the user of a standardized test to obtain an external, broadly based standard for judging the achievement of pupils."⁶⁰

Through the use of standardized reading tests an appraisal of growth of individuals or groups is more easily made. They are a great aid in identifying the gifted pupils as well as a child with a reading handicap. More children can receive the kind of help they need because of reading tests. According to Nila B. Smith's consideration of what has been done in the area of remedial reading, certainly testing is a contributing factor. She stated,

The science of remedial reading has developed tremendously in recent years. We now know how to identify remedial readers, and we have developed ways of diagnosing and treating them. The layman often jumps to the conclusion that since he has only heard about remedial readers in fairly recent years, that we didn't have them in the good old days.⁶¹

⁶⁰Ebel, VLI, 32.

⁶¹Smith, VII, 187.

Deeper search into reading problems has helped to give a greater knowledge of the sources of present-day reading problems. Many difficulties have their background in the pupil's health and physical handicaps or his home and social environment, as well as in educational factors alone. Betts urged an improvement in health services in schools, because impaired hearing faulty vision, and brain injury are other defects that block learning. The need in each of these areas does not seem to decrease over the years in any area to a noticeable degree, although in comparing schools now with those of years past the factor of drop-outs is not a concern. This view was expressed by Betts as follows: "Children with reading problems have always been in the schools, but they either quit school or were considered stupid. So there probably has been no increase in the number of non-readers."⁶²

Summary

Modern living demands modern reading. Children must be able to read with greater efficiency. Parents and the public are constantly on the alert to find changes, to find improvement, and even to find error in reading instruction in American schools today. Experts are ever investigating into the past, observing the present, and experimenting for the future in order that materials and methods of instruction, curriculum, and evaluation might be the best that education can

⁶²E. A. Betts, "Reading: Now and Then", Education, LXXVIII (October, 1957), p. 86.

offer.

The primary purpose of the present study is to compare the difference in difficulty between earlier and recent standardized reading tests. However, since the research to date concerning this specific area is very limited, the writer has devoted her second chapter to a comparison of reading achievement today and twenty years ago and to a discussion of standardized reading tests.

There is great speculation and consternation, but not a wealth of research about the status of reading achievement. The writer has cited the results from a number of studies to compare the reading achievement of today with that of twenty-five years ago. Findings are not so spectacular as to warrant complacency on the part of educators; but neither should educators have a feeling of defeat. It is the opinion of most authors, and the conclusions of those who have conducted investigations, that children today read as well or better than children of earlier days.

The value of standardized reading tests as an aid to evaluation has been realized more and more over the years as educators become more scientific in their profession. Such instruments which furnish standards of achievement, as well as pupils' strengths and weaknesses in reading with a certain degree of reliability, are not to be disregarded. Gray and Reese stated:

Authorities in the field of educational measurement hold to high standards. They maintain that reading ability

is measureable only in the result, and cannot be accurately appraised by merely watching the process and noting how pupils study, how they enjoy reading, and so on -- although these factors are important in the learning process.⁶³

In the light of the review of standardized achievement tests as presented in this study, it is clear that reading tests are limited to only a few of the aspects of reading. Other limitations in standardized tests are the element of time, error of measurement, requirement for written response, and the limited range for recording results.

Standardized reading tests have much to offer. Among the strong points cited were analysis of items used, the reliability with which it measures, the norms that have been established, and the insight into pupil diagnosis and group progress.

Users of tests would be wise to investigate the abundance of available tests before making a selection, in order to choose the one that will best fit their program. These tests can be valuable tools in measuring reading achievement, particularly if they are used with proper interpretation. Because reading is one of the most necessary and valuable of all school subjects, it is the subject of most criticism. Controversial issues have arisen about reading instruction, testing, and about education in general and they will continue to arise in the future. Caswell noted progress in saying, "To

⁶³Lillian Gray and Dora Reese, Teaching Children To Read, (New York: The Ronald Press Company, 1957), p. 443.

a greater extent than ever before, education has been seen as a means of improving the everyday living of people."⁶⁴

Controversy and criticism can give incentive to greater explorations that lead to discoveries in this field and many related ones. It is the opinion of the writer, gained from this investigation, that at the present time leaders in education are thrusting forward in almost every area with a seeming unrest until their goals are achieved. In the meantime the high quality of material now available in the areas of reading and testing, if used to advantage, will be sufficient instruments for the competent teacher or administrator in contributing to worthwhile education.

⁶⁴H. L. Caswell, "Achievement and Challenge", National Education Association Journal, XLVI (March, 1957), p. 143.

CHAPTER III

THE PROCEDURE

The purpose of this study was to compare the difficulty of the early and recent editions of standardized reading tests. By comparing the differences between performance on two editions of the Stanford Reading Test and the Metropolitan Reading Test, the writer hoped to find out whether the recent test is more difficult, and whether the achievement of children is better on recent tests than on earlier tests. It was also the aim of this work to compare the results of certain Cedar Rapids children with national norms of the earliest and latest available tests. Furthermore, by this comparison, there was a possibility of contributing in some measure to the discussion of present day achievement in relation to achievement a quarter of a century ago.

Standardized Tests

Description of Tests Used

Inquiry was made of publishers of several popular standardized reading tests. Except in the case of two tests it was impossible for this writer to find a span of twenty years between editions. Therefore it was necessary to confine the experiment to the use of the Stanford Reading Test and the Metropolitan Reading Test.

The earliest available test for the Stanford was the 1929 edition, which was used together with the 1954. Although the 1932 edition of the Metropolitan was out of print, copies of the original test were obtained by an offset printing made possible with permission of the Harcourt, Brace and World Incorporated.¹ Their most recent edition, 1959, was chosen, making at least twenty-five years difference between the two editions of both the Stanford and the Metropolitan test.

The Metropolitan Achievement test was first published in 1932; minor revisions were made in 1936. During the period 1947-50, completely new forms were published. Hobson, in reviewing this series of reading tests, claimed: "The 1947 revision and restandardization involved the largest and most complete standardizing population yet used in the development of a standardized measure of achievement."² A large amount of research went into each revision of the tests, as Durost reported in his manual for these tests:

The authors reviewed expert pronouncements concerning the goals of elementary education, current research on the nature of essential skills, such as reading and work-study skills, representative course of study, and several widely-used textbook series in the various branches.³

¹Letter from Blythe C. Mitchell, Advisory Service, Harcourt, Brace and Company, Inc. and World Book Company combined under the new firm name of Harcourt, Brace and World, Inc., effective in December, 1960.

²James R. Hobson, "Review of Metropolitan Achievement Tests, 1947 Edition," The Fourth Mental Measurements Yearbook, ed. Oscar K. Buros (New Jersey: The Gryphon Press, 1953), p. 583.

³Walter N. Durose, Manual For Interpreting Metropolitan Achievement Tests (New York: Harcourt, Brace and World, Inc. 1962), p. 1.

The Metropolitan Reading Test: Form A, 1932 edition,⁴ measures vocabulary and reading. There are 65 items in the reading sub-test which is divided into two parts. In the first part the testee is required to supply the missing words in paragraphs; in the second part answers are to be written in the blanks for questions on the content of paragraphs. Gertrude H. Hildreth explained that these types eliminate the chance of answering recognition-type questions without having read content material, allowing for a higher level of comprehension measurement.⁵ Worcester criticized this in his review, stating,

The scoring of the intermediate and advanced test is quite largely subjective. The keys list several correct answers for some items but do not include all of the answers which may be correct, and do not suggest the possibility of several answers in some instances where the possibility exists. A single difference in the number of correct answers, however, may make as much as two months difference in a child's reading age equivalent.⁶

The norms for this first publication of the Metropolitan Reading Test were limited to a standard score, a grade equivalent, and an age equivalent.

The 1959 edition of the Metropolitan Achievement Test Intermediate Reading Test Form CM⁷ consisted of a word-knowledge

⁴Richard D. Allen et al., Metropolitan Achievement Tests Intermediate Reading Test: Form A (New York: World Book Company, 1932).

⁵Gertrude H. Hildreth, Manual for Interpreting Metropolitan Achievement Tests (New York: World Book Company, 1948).

⁶D. A. Worcester, "Review of Metropolitan Achievement Tests, 1932 Edition," The Nineteen Forty Mental Measurements Yearbook, ed. Oscar K. Buros (New Jersey: The Gryphon Press, 1941).

⁷Walter N. Durost et al., Metropolitan Achievement Tests Intermediate Reading Test: Form CM (New York: Harcourt, Brace and World, Inc., 1961).

test of 55 items. There are 44 items in the reading test designed to measure

reading comprehension through a series of reading selections, each followed by several diversified questions aimed at measuring ability to get the central thought of the selection, to derive the meaning of a word from context, to recall significant details and to infer some new fact from the information given.⁸

Norms derived for scores on this test are a standard score, grade equivalent, percentile rank, and stanine.

Just as it is true of other major achievement tests, the two tests used for this study have been revised periodically. The Stanford Achievement Test was first published in 1923, completely revised in 1929, again in 1940, and most recently in 1954.

The New Stanford Reading Test: Form V, 1929 edition⁹ was designed for administration in grades two to nine. To have a single test cover so many grades is not the practice of test-makers today who construct a separate test for every three or four different grade levels. There are 80 blanks in the paragraph meaning sub-test that are to be filled in with words which best fit into the meaning of the paragraphs. The 80 items in the word meaning section call for the selection of correct synonyms or words that would correctly complete the sentence.

⁸Walter N. Durost, Manual For Interpreting Metropolitan Achievement Tests (New York: Harcourt, Brace and World, Inc., 1962), p. 3.

⁹Truman L. Kelley, Giles M. Ruch, and Lewis M. Terman, New Stanford Reading Test: Form V (New York: Harcourt, Brace and World, Inc., 1929).

Norms obtained from this test are a standard score, reading age and school grade.

The Stanford Achievement Test, Intermediate Reading Test: Form LM, 1954 edition¹⁰ eliminated the necessity of written responses; "hence," said Helen Robinson, "the score is not contaminated by handwriting and spelling."¹¹ In the paragraph meaning sub-test of this revision there are 48 items. The correct word for each is to be selected from a group of four answers. Reviewers of this achievement test do not all agree about the proper method of measuring comprehension. Robinson found fault with the procedure:

Unfortunately, the paragraph meaning section relies entirely on selecting words to fit the context. Hence, the pupils who have had considerable experience and instruction in using context clues are likely to earn higher scores, even though they can read less well than other pupils who have had no such instruction.¹²

On the other hand Gage took a favorable view of the method employed in the Stanford test. He stated that

the Stanford method seems superior in that it puts a problem more intrinsic to the paragraph, as against the somewhat after-the-fact flavor of questions posed after the paragraph has been completely read. The Stanford test's approach requires that the proper word be fitted into the paragraph itself; in the question-asked-after-the-paragraph-approach, the questions may get at points

¹⁰Truman L. Kelley et al., Stanford Achievement Test Intermediate Reading Test: Form LM (New York: World Book Co., 1954).

¹¹Helen M. Robinson, "Review of Stanford Achievement Tests, 1953 Edition," The Fifth Mental Measurements Yearbook, ed. Oscar K. Buros. (New Jersey: The Gryphon Press, 1959), p. 755.

¹²Ibid..

which seem unimportant to the reader and require that he look back into the paragraph.¹³

The word meaning section of the 1953 Stanford test also contains 48 items. In each item there are four words from which to make the correct choice in completing a sentence. Gage, in commenting on this particular form of test exercise, contends that this is more logical than the requirement of a synonym or antonym and "probably also factorially more complex."¹⁴ Scores on the 1953 edition yield the following norms: standard score, modal-age grade equivalent, total-group grade equivalent, percentile, and age equivalent.

Terms used in tests.--A clarification of terms as used in the four tests described is considered necessary in order to avoid confusion. Synonymous terms are as follows:

- a. Total reading, average of scores on sub-tests
- b. Paragraph meaning, reading
- c. Vocabulary, word meaning
- d. Grade equivalent, school grade

Throughout the remainder of this study, the first term of each pair will be used.

Administration and Scoring of the Tests

The administration of the two editions of the Metropolitan Reading Test and the two editions of the Stanford Reading Test was conducted by the writer within a two-week period in

¹³N. L. Gage, "Review of Stanford Achievement Tests, 1953 Edition," *The Fifth Mental Measurements Yearbook*, ed. Oscar K. Buros. (New Jersey: The Gryphon Press, 1959), p. 77.

¹⁴Ibid.

February, 1963. All four tests were given in the children's own classrooms in order to make the testing as natural a situation as possible in enlisting the best efforts of the pupils.

Directions for administering, as written in the manuals for the Stanford Reading tests and the Metropolitan Reading tests, were adhered to exactly. For the recent editions of both tests, separate answer sheets were used. Correcting and scoring was done by hand according to the keys and tables supplied with the tests. A copy of each test used is included in the Appendix.¹⁵

Population

Boys and girls of the sixth grade in four parochial schools in Cedar Rapids, Iowa, made up the experimental group. There were 216 children who completed the four tests, and an additional 17 children took some of the tests. The tests for these 17 children were eliminated from the study, because, since they were absent from some sittings of the testing, they would therefore furnish incomplete individual scores.

There was no effort made to select children with regard to intelligence or socio-economic status, although parents were largely young professional people. It is the opinion of the writer that this is a representative population of above average, average, and slow learners.

¹⁵See Appendix II, p. 78.

Statistical Procedures

Grade equivalent scores were used in comparing data, as raw scores are not comparable for different kinds and forms of standardized tests.

The coefficient of correlation was determined by the Pearson Product-Moment method¹⁷ for a comparison between the early and recent scores of each of the following: (1) Stanford paragraph meaning, (2) Stanford vocabulary, (3) Stanford total, (4) Metropolitan paragraph meaning, (5) Metropolitan vocabulary, and (6) Metropolitan total.

The means were found for each sub-test and total of the Stanford Reading Test and the Metropolitan Reading Test. To compare the means of the early tests with those of the recent tests, the difference between means were computed. The t-test was then used to determine the significance of difference between the means.

Summary

The tests chosen for study were the 1929 and the 1954 editions of the Stanford Reading Test and the 1932 and the 1959 editions of the Metropolitan Reading Test with a span of twenty-five years between editions. They are similar in structure and length. Each of them consists of two sub-tests, namely, a vocabulary test and a paragraph meaning test. The two earlier

¹⁷Formula for use with a calculating machine:

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

editions of the paragraph meaning tests require a written response that best fills the blank. This type of test is quite subjective. The later editions show an improvement over the former in that alternatives are provided from which the correct selection is to be made for filling a blank.

The publishers of the Stanford Reading Test and the Metropolitan Reading Test have revised these tests periodically in order that the tests might "reflect changes in educational goals, curricula, and instructional material." Their aim is to "measure what is actually being taught in the schools" through the use of their most recent test and thus "describe current achievement."¹⁸

Each of the four tests used yield a grade equivalent score which was the common norm used for all statistical procedures. The degree of correlation between the various sub-tests and totals was determined. The t-test was used to find the significance of difference between the means of the various tests.

The population for this study was 216 children from the sixth grade of four parochial schools of Cedar Rapids, Iowa. The children were given the four tests during two weeks in February, 1963.

¹⁸Selected Excerpts from Test Service Letters, Division of Test Research and Service, (New York: World Book Company, 1958), No. 306. (Mimeograph)

CHAPTER IV

INTERPRETATION OF DATA

The major objective of this study was to ascertain whether there is a difference in performance between present day standardized reading tests and reading tests of a quarter of a century ago through administration of standardized tests representative of the present and of the earlier types of tests.

Secondary objectives were: (1) to compare the difficulty between the present reading tests and earlier editions, (2) to determine whether the achievement of children is higher on present day tests than their achievement on earlier editions, (3) to compare the results from the group used for this study with national norms, and (4) to determine whether children read better today than they did twenty-five years ago.

The standardized reading tests used in this study were the 1929 and the 1954 editions of the Stanford Reading Achievement Test and the 1932 and the 1959 editions of the Metropolitan Reading Achievement Test.

Comparison of the Earlier and Recent Editions of Tests

Stanford Reading Achievement Test

The means of the early and the recent editions of the Stanford Reading Test were compared by means of a t-test.

Results of this comparison are given in Table 1. The score for the total reading mean of the earlier test was two months higher than the mean of the recent test. This difference is statistically insignificant. The mean score for the paragraph meaning sub-test on the earlier edition was four months higher than the recent edition which is not significantly different. Similarly for the vocabulary sub-test, there is no significant difference, the mean of the earlier edition falling one month below that of the recent edition.

The coefficients of correlation found for the Stanford Reading Tests were moderately high, ranging from .74 for the total reading and for the vocabulary test, to .78 for the paragraph meaning test.

Although the means obtained in the earlier and recent edition show a slight difference according to this study, the difference is not significant. This would indicate that the Stanford Reading Test of today is no more difficult than the Stanford Reading Test of twenty-five years ago.

Metropolitan Reading Achievement Test

Results of the comparison of the means of the earlier and recent editions of the Metropolitan Reading Test are also given in Table 1. The mean of the total reading for the earlier edition was one year, two months below the recent edition, a difference which is insignificant at the .05 level of confidence. For the paragraph meaning sub-test the mean of the earlier edition is one year below the mean of the recent edition. No significant difference is shown here or for the

TABLE 1

STATISTICAL RESULTS OF COMPARISONS BY THE PEARSON
 PRODUCT MOMENT METHOD BETWEEN EARLIER AND
 RECENT EDITIONS OF TESTS
 (N = 216)

Test	Edition	M	SD	SE _M	r	Diff	SE _D	t ratio	Conf. Level
Stanford Para.Mean.	Earlier	8.3	5.8	.39	.78	.4*	1.09	.53	Insig.
	Recent	7.9	15.0	1.02					
Metropolitan Para.Mean	Earlier	7.2	2.3	.16	.78	-1.0	.94	1.23	Insig.
	Recent	8.2	13.6	.93					
Stanford Vocabulary	Earlier	8.2	5.8	.39	.74	-.1	.89	.17	Insig.
	Recent	8.3	11.7	.80					
Metropolitan Vocabulary	Earlier	7.3	3.3	.22	.55	-1.0	1.23	.91	Insig.
	Recent	8.3	17.7	1.21					
Stanford Total	Earlier	8.3	5.8	.39	.74	.2*	.95	.31	Insig.
	Recent	8.1	12.8	.87					
Metropolitan Total	Earlier	7.2	2.3	.16	.73	-1.2	.94	1.47	Insig.
	Recent	8.4	13.6	.93					

* Favors Earlier Tests

vocabulary sub-test where the mean for the earlier test is also one year below recent test.

There is a somewhat wider range in coefficients of correlation for the Metropolitan Reading Tests than were calculated for the Stanford Tests. The "r" for the total Metropolitan is .73, for the paragraph meaning it is .78 while the "r" for the vocabulary dropped to .55.

Considering the mean scores on the Metropolitan tests, it would seem that, according to this study, the tests of today are somewhat easier since there was a difference of one year for each of the sub-tests and one year, two months for the total Metropolitan tests. However, this was not enough to be statistically significant.

Comparisons Between Tests

A summary of the range of scores on the various tests is given in Table 2 as well as are the mean and standard deviation for each. The table shows that the grade equivalent scores gained by the sixth grade pupils of this study spread over considerably wider range on the recent test than did the scores on the tests of twenty-five years ago, and the SD was much greater. This might indicate that test construction and revision of norms through restandardization show improvement over their earlier editions. It might also be indicative of greater attention to individual differences in schools of today so that pupils are challenged to reach out to their maximum potential. In comparing the sub-tests of the early and late

TABLE 2

**GROUP CHARACTERISTICS BASED ON TEST RESULTS
OBTAINED BY THE USE OF STANDARDIZED
READING ACHIEVEMENT TESTS
(N = 216)**

Test	Skills Tested	Range	Mean	S.D.
Stanford 1929	Para. Meaning	4.6 - 10.0	8.3	5.78
	Vocabulary	4.6 - 10.0	8.2	5.78
	Total	4.6 - 10.0	8.3	5.78
Metropolitan 1932	Para. Meaning	4.8 - 9.0	7.2	2.33
	Vocabulary	4.5 - 8.5	7.3	3.26
	Total	4.7 - 8.6	7.2	2.34
Stanford 1954	Para. Meaning	3.1 - 10.9	7.9	14.97
	Vocabulary	4.0 - 11.8	8.3	11.70
	Total	3.7 - 11.2	8.1	12.79
Metropolitan 1959	Para. Meaning	3.5 - 10.0	8.2	13.56
	Vocabulary	3.3 - 10.0	8.3	17.69
	Total	3.9 - 10.0	8.4	13.57

Stanford tests it is well to note that, in the 1929 edition, paragraph meaning is one month higher than the vocabulary, while in the 1954 edition, vocabulary is four months higher than paragraph meaning. The Metropolitan sub-tests show fewer differences: the vocabulary mean score recorded just one month higher than the paragraph meaning on both the 1932 edition and on the 1959 edition. The experimenter suggests that results would be quite different if it were not for the low ceiling on two complete tests; namely the 1929 Stanford, and the 1959 Metropolitan. This is another variable which makes comparison difficult.

The writer believes that this factor contributes to what a number of experts in the field of testing claim. In an excerpt from a letter from the Division of Test Research and Service it is stated:

Comparisons of current achievement with achievement let us say 25 or 30 years ago are not easy. Differences in quality of pupil population (especially in the upper elementary grades), differences in normative groups for various tests are only a few of the difficulties that confront one in attempting research on this "then and now" question.¹

Table 3 shows the performance of these sixth grade pupils on the four tests with reference to reading grade placement. The national norm in terms of grade placement at the time of testing for this study was 6.6, since the testing took place in the sixth month of the school year. This norm

¹Division of Test Research and Service, World Book Company, Selected Excerpts from Test Service Letters, In Response to Inquiries Concerning Relative School Achievement Now and Previously, No. 306 (New York: Yonkers-on-Hudson, 1958)

TABLE 3

STATUS OF PUPILS' READING ACHIEVEMENT WITH REFERENCE
TO THEIR SIXTH GRADE READING PLACEMENT AS
MEASURED BY TEST SCORES
(N = 216)

Test	No. 3 Yrs. or more above Gr. Place.	No. 2-2.9 Yrs. above Gr. Place.	No. 1-1.9 Yrs. above Gr. Place.	No. .9 below to .9 above Gr. Place.	No. 1-1.9 Yrs. below Gr. Place.	No. 2-2.9 Yrs. below Gr. Place.	No. 3 Yrs. or more below Gr. Place.
Stan. 1929	25.00%	16.20%	25.46%	31.02%	1.85%	.46%	
Stan. 1954	23.15%	20.83%	20.37%	26.85%	6.48%	2.31%	
Met. 1932		.93%	42.13%	51.85%	5.09%		
Met. 1959	41.20%	12.50%	13.43%	21.76%	8.33%	2.78%	

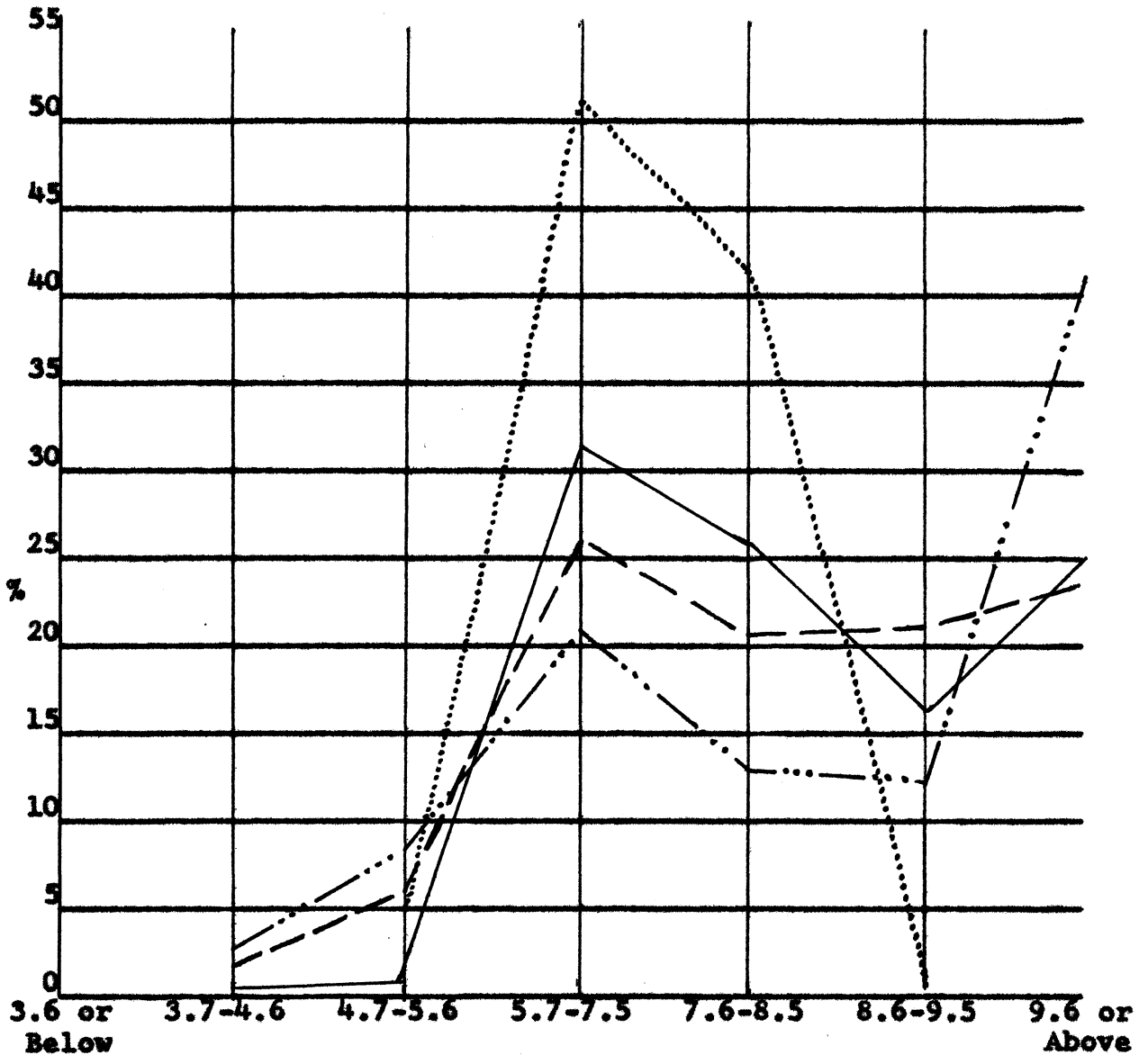
falls in the center of the fourth group in Table 3. This fourth group is the average group which includes scores ranging from one year below to one year above the norm.

In the construction of a standardized test it is important that the test will include a range of difficulty wide enough "so that the poorest reader in the lowest grade for which the test is intended can get something right, and so that the best reader in the highest grade for which the test is intended cannot get a perfect score."²

The tests for this study were given in the middle of the sixth grade which is near the upper part of the grade range for which the tests were intended. Table 3 shows a clustering of scores toward the upper limits of the distribution preventing a normal distribution. This is probably an indication that the tests were too easy for testing sixth grade pupils at this time of the year.

In the earlier Metropolitan edition test scores fall within a quite narrow range. It appears that the norms were established with little discrimination at the upper and lower limits of the grades within this testing range. It might be a good test for measuring work done by fifth grade pupils whose scores would be quite average, but a poor instrument in determining the limits reached by fourth grade or sixth grade pupils whose scores would be expected to extend farther toward the extreme ends.

²Albert J. Harris, How to Increase Reading Ability (New York: Longmans, Green and Company, 1961), p. 167.



Reading Achievement Tests:
 Stanford 1929 _____
 Stanford 1954 _____
 Metropolitan 1932
 Metropolitan 1959 _____

Fig. 1.--Comparison of earlier and recent test scores by percentage of two hundred sixteen pupils who obtained reading grade scores between 3.1 and 11.8 as determined by standardized test scores.

A graphic comparison of the same scores of the four tests is shown in Figure 1. In the distribution of scores the mean and standard deviation from the mean were not considered; however, a bell-shaped curve can be noted to some extent.

Scores on the 1929 Stanford and the 1954 Stanford test present similar pictures. The range of scores for the two tests is the same. In conformity to the normal curve, cases should become less at the outer limits, but scores tend to increase somewhat at the upper limits for both the early and recent tests.

The 1959 Metropolitan test resembles the Stanford tests except that the number of scores in the upper limits exceeds that in any other group. Scores on the 1932 Metropolitan test more closely approximates the normal curve than do those of the other three tests, expect that the narrow range of scores does not allow for the tapering-off at the lower and upper extremes of the curve.

It may be noted that each test is negatively skewed, thus showing a non-normal distribution of scores. This finding indicates that, for this group, the tests were too easy.

Referring to Table 4, a like picture is observed in terms of mean grade-placement, or 6.6 as the national norm. The Stanford total mean for the earlier edition was 8.3 or one year, seven months above the national norm while the recent Stanford with a mean of 8.1 showed this group to be one year, eight months above the national norm.

TABLE 4

DIFFERENCES BETWEEN MEANS OF THE VARIOUS
TESTS AND THE NATIONAL NORM
(N = 216)

Test	Area			Nat'l Norm
	Par.Mean.	Voc.	Total	
Stan. 1929	8.3	8.2	8.3	6.6
Stan. 1954	7.9	8.3	8.1	6.6
Met. 1932	7.2	7.3	7.2	6.6
Met. 1959	8.2	8.3	8.4	6.6

Summary

Analysis of data obtained for the present study shows that there is no statistically significant difference between the means of the early and recent editions of the Stanford Reading Achievement Tests or between those of the Metropolitan Achievement Reading Tests. The coefficients of correlation between tests were in general moderately high. Scores on the earlier Metropolitan Reading Test indicate that this test might have been somewhat more difficult in comparison with the other three tests.

The range of scores on the recent tests is wider than on the earlier tests, indicating improvement of test construction.

The group of Cedar Rapids children who were tested scored slightly higher on the recent tests than on earlier tests, and well above the national norms on both editions of the Stanford and Metropolitan Reading Tests.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The primary purpose of this study is to make a comparison between the performance on the earliest available edition and the most recent edition of two standardized reading tests. Specific objectives of this research are:

1. to determine whether present reading tests are more difficult than early editions.
2. to compare the achievement on present day tests with that on early editions.
3. to find out how this experimental group of children compare with national norms of earlier and recent tests.
4. to determine whether children are better in reading today than were children of a quarter of a century ago.

The population for this study was 234 sixth grade children of four parochial schools in Cedar Rapids, Iowa. Tests used were: (1) New Stanford Reading Test - 1929, (2) Stanford Achievement Test, Intermediate Reading Test: Form LM-1954, (3) Metropolitan Achievement Tests, Intermediate Reading Test: Form A - 1932, and (4) Metropolitan Achievement Tests, Intermediate Reading Test: Form CM - 1959.

To compare the data, grade equivalent scores were used, and the coefficient of correlation was determined for comparisons between the early and recent scores of each sub-test

according to the Pearson Product-Moment method. Means for the paragraph meaning sub-test, vocabulary sub-test, and for the total of the Stanford and Metropolitan tests were found. In order to determine the significance of difference between the means of the early and the recent tests the writer used the t-test.

Findings

The correlation coefficients between the early and recent scores of the various components of the Stanford Reading Tests and Metropolitan Reading Tests were moderately high, as are shown in Table 1. The "r" for paragraph meaning on both the Stanford and the Metropolitan tests was .78, for the Stanford vocabulary the "r" was .74 and for the Metropolitan vocabulary it dropped to a low of .55. For the total Stanford the "r" was .74 and for the Metropolitan total the "r" was .73.

Means were lowest for the tests of the 1932 Metropolitan with a total mean of 7.2 while the total mean for the early Stanford was 8.3. Later test means were comparable to that of the early Stanford, with 8.1 as the mean for the 1954 Stanford and 8.4 the mean on the 1959 Metropolitan. It is also noted that the range of the test scores had a greater spread on the recent tests than on either of the earlier tests. The ceiling on the earlier editions of the Stanford and the Metropolitan was reached in each sub-test.

In the distribution of scores in Table 3 more consistency is shown for the Stanford tests than for the two Metropolitan tests.

The 1932 Metropolitan test yields the most complete normal curve as indicated graphically in Figure 1. Curves for each test are negatively skewed.

Mean scores range from .6 to 1.8 years higher than the national norm as shown in Table 4.

Conclusions and Implications

The findings of this study lead to the following conclusions and implications:

1. The Stanford Reading Test of today is no more difficult than the earlier edition.
2. The lower scores obtained on the earlier Metropolitan Reading Test indicate that this test for this group was more difficult than the recent edition, although the t-test did not show a statistical difference.
3. The greater range of scores and larger standard deviation of the present day tests show an improvement in test construction over the earlier editions.
4. The low ceiling on the early edition of the Stanford Reading Test and on the recent edition of the Metropolitan Reading Test hinder a completely reliable comparison.
5. Scores show that this group of children scored well above the national norm on each of the tests.
6. Considering the changing goals and objectives, curricula and grade-placement, promotions and drop-outs, and also changes in methods of testing, it appears that children are reading as well as or better than they did twenty-five years ago.

This last conclusion the writer draws from experimental testing in the limited groups of children used in this study and, more especially, from the knowledge gained through research into the writings of those more experienced with problems in reading.

There are so few studies that have been made comparing the achievement of children twenty-five years ago with the achievement of children today because of the lack of available records of tests taken then. Research must be continued in the next best way, and it is for this reason the present study was undertaken. The results that are produced by comparing performance on tests which were used as measurements for achievement then with performance on tests which are used as measurements for achievement now should be some contribution to present information on this particular phase in the field of reading.

Suggestions for Further Study

Suggestions for further research which might prove valuable are:

1. A similar study, using the same tests on a lower grade level to allow for a better ceiling for the same purposes outlined in this study.
2. Analysis of item difficulty of the two editions of tests to determine the differentiation power of end items.

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APPENDIX I

**RESULTS OBTAINED ON THE STANFORD
READING ACHIEVEMENT TESTS
1929 and 1954**

Pupil	Para.	Mean.	Vocab.		Total	
	1929	1954	1929	1954	1929	1954
1	10.0	10.1	10.0	11.8	10.0	10.0
2	9.8	9.2	9.5	10.2	9.7	9.7
3	7.8	6.0	7.6	7.8	7.8	6.9
4	10.0	9.9	9.0	8.6	10.0	9.3
5	8.9	8.8	8.1	8.6	8.5	8.7
6	10.0	10.5	10.0	11.8	10.0	11.2
7	6.4	6.6	6.6	6.7	6.6	6.7
8	8.7	8.8	9.8	10.9	9.3	9.9
9	10.0	10.1	9.5	8.9	9.8	9.5
10	6.1	7.9	7.9	6.7	7.0	7.3
11	6.3	4.5	7.9	7.6	7.1	6.1
12	9.7	8.5	8.7	9.5	9.2	9.0
13	10.0	9.9	8.9	8.1	9.7	9.0
14	9.0	9.2	6.7	10.2	7.8	9.7
15	10.0	9.6	10.0	10.2	10.0	9.9
16	9.8	8.8	9.2	10.2	9.5	9.5
17	6.3	6.6	7.4	7.4	6.8	7.0
18	10.0	9.6	10.0	11.8	10.0	10.7
19	7.6	7.5	9.0	9.5	8.4	8.5
20	5.9	8.2	7.4	8.3	6.6	8.3
21	8.7	8.8	9.0	7.8	8.9	8.3
22	9.5	7.2	8.7	8.6	9.2	7.9
23	7.1	8.8	8.9	8.3	7.9	8.6
24	7.1	8.8	8.1	7.3	7.0	8.1
25	9.3	8.5	9.2	9.5	9.3	9.0
26	9.5	8.2	9.7	9.5	9.7	8.9
27	7.5	8.8	7.2	8.1	7.4	8.5
28	8.9	9.6	7.9	8.9	8.4	9.3
29	5.7	4.5	5.8	5.4	5.8	5.0
30	10.0	8.5	9.3	11.8	9.7	10.2
31	6.1	3.4	5.4	4.0	5.7	3.7
32	6.8	7.2	7.9	8.6	7.4	7.9
33	8.4	9.6	9.2	8.9	8.9	9.3
34	10.0	10.9	10.0	10.2	10.0	10.6
35	9.0	8.5	9.2	10.3	9.1	9.7
36	8.9	7.2	9.2	7.4	9.0	7.3
37	7.5	8.5	9.0	8.9	8.2	8.7
38	5.7	5.8	9.0	7.8	7.2	6.8
39	9.5	10.5	9.3	9.5	9.5	10.0
40	10.0	9.9	10.0	10.9	10.0	10.4
41	10.0	10.1	10.0	11.8	10.0	11.0

42	8.9	7.7	9.5	8.3	9.2	8.0
43	10.0	8.8	9.8	9.5	10.0	9.2
44	7.1	7.0	8.1	8.3	7.6	7.7
45	7.5	7.9	7.1	7.8	7.4	7.9
46	8.2	9.2	8.9	10.2	8.5	9.7
47	10.0	9.2	9.0	8.9	9.7	9.1
48	10.0	9.9	10.0	10.2	10.0	10.1
49	8.4	5.6	7.8	8.1	8.1	6.9
50	10.0	10.1	10.0	10.2	10.0	10.2
51	8.1	8.8	10.0	8.3	9.2	8.6
52	7.2	7.9	9.5	7.8	8.4	7.9
53	7.6	6.7	7.8	8.6	7.8	7.7
54	5.7	5.4	6.1	7.1	5.9	6.3
55	10.0	10.9	10.0	10.9	10.0	10.9
56	7.2	10.1	7.6	8.9	7.5	9.5
57	6.8	7.7	6.1	7.8	6.4	7.8
58	6.2	6.5	7.1	6.4	6.7	6.5
59	9.8	9.6	10.0	8.9	10.0	9.3
60	7.6	7.7	7.8	8.1	7.8	7.9
61	10.0	9.2	7.9	10.9	9.3	10.1
62	8.2	8.5	7.2	7.6	7.8	8.1
63	8.2	5.6	6.4	5.5	7.4	5.6
64	8.7	8.5	7.8	8.9	8.2	8.7
65	10.0	9.2	10.0	10.2	10.0	9.7
66	7.0	6.6	6.4	6.9	6.7	6.8
67	7.5	6.7	7.8	7.4	7.6	7.1
68	7.2	7.2	7.4	6.9	7.4	7.1
69	9.3	6.2	9.0	8.9	9.2	7.6
70	5.8	5.1	6.7	6.3	6.2	5.7
71	5.8	4.7	6.2	5.0	6.0	4.9
72	8.1	7.5	7.8	5.1	7.9	7.3
73	9.5	5.2	7.8	7.4	8.7	6.3
74	8.7	9.2	8.4	8.1	8.5	8.7
75	6.8	7.5	6.1	6.3	6.4	6.9
76	5.7	5.8	4.8	5.0	5.3	5.4
77	8.9	8.8	8.1	8.9	8.5	8.9
78	10.0	9.2	9.3	10.2	10.0	9.7
79	8.2	8.2	8.4	9.5	8.4	8.9
80	6.4	8.2	7.4	6.3	7.0	7.3
81	10.0	9.6	10.0	10.2	10.0	9.9
82	8.7	8.8	8.4	8.3	8.5	8.6
83	7.5	7.5	7.4	6.9	7.5	7.2
84	5.9	5.6	5.6	6.4	5.7	6.0
85	8.9	8.8	9.6	6.5	9.2	7.7
86	8.1	6.7	7.8	8.1	7.9	7.4
87	10.0	9.6	10.0	9.5	10.0	9.6
88	7.0	6.1	7.2	8.6	7.1	7.4
89	7.8	7.7	8.1	7.4	7.9	7.6
90	7.6	7.9	6.6	7.6	7.1	7.8
91	6.1	5.1	6.6	6.0	6.3	5.6
92	5.1	6.2	6.7	6.3	5.8	6.3
93	10.0	10.5	10.0	10.2	10.0	10.4

94	6.8	6.2	7.8	6.7	7.4	6.5
95	7.5	7.2	8.5	7.4	7.9	7.3
96	8.4	7.7	7.6	8.6	8.1	8.2
97	9.5	9.9	7.0	8.1	8.2	9.0
98	9.3	8.8	9.5	7.8	9.5	8.3
99	9.3	9.6	9.2	7.4	9.3	8.5
100	5.8	4.0	6.3	6.0	6.1	5.0
101	8.2	7.9	7.8	8.1	8.1	8.0
102	4.7	4.4	5.8	4.4	5.3	4.4
103	10.0	9.6	9.5	8.6	9.8	9.1
104	7.8	8.8	8.1	7.6	7.9	8.2
105	7.2	6.5	8.5	7.4	7.6	7.0
106	8.2	9.2	7.6	7.3	7.9	8.3
107	8.7	7.0	7.8	8.3	8.2	7.7
108	5.7	7.7	5.7	7.1	5.7	7.4
109	6.1	3.4	7.0	6.0	6.6	4.7
110	9.8	9.9	9.7	8.9	9.8	9.4
111	4.6	4.4	4.6	4.5	4.6	9.4
112	6.2	6.6	7.2	7.3	6.7	7.0
113	6.7	6.7	7.0	6.4	6.8	6.6
114	10.0	10.9	10.0	10.9	10.0	10.9
115	8.9	7.7	7.4	7.8	8.1	7.8
116	10.0	9.6	9.2	10.2	10.0	9.9
117	9.8	8.8	9.5	8.3	9.7	8.6
118	7.2	7.0	7.8	6.1	7.5	6.6
119	10.0	8.8	9.8	8.9	10.0	8.9
120	8.9	7.7	9.8	7.8	8.3	7.8
121	9.8	9.6	9.8	8.6	9.8	9.1
122	10.0	9.6	10.0	8.9	10.0	9.3
123	6.7	6.5	6.3	7.6	6.6	7.1
124	8.2	6.5	8.4	8.3	8.4	7.4
125	4.9	4.0	4.8	4.1	4.9	4.1
126	8.4	7.2	7.4	7.1	7.9	7.2
127	7.8	7.7	8.5	8.3	8.2	8.0
128	10.0	9.9	10.0	10.9	10.0	10.4
129	10.0	10.9	10.0	10.2	10.0	10.6
130	10.0	8.5	9.2	8.6	9.7	8.6
131	7.8	6.5	7.8	6.7	7.8	6.6
132	10.0	9.6	10.0	10.9	10.0	10.3
133	9.8	9.2	8.5	10.2	9.2	9.7
134	9.3	6.6	8.7	7.1	9.0	6.9
135	7.1	8.8	8.9	7.8	7.9	8.3
136	7.1	8.8	8.7	11.8	7.9	10.3
137	9.0	6.7	7.8	7.6	8.4	7.2
138	10.0	9.2	10.0	10.2	10.0	9.7
139	10.0	10.1	10.0	9.5	10.0	9.8
140	6.8	7.2	7.8	8.3	7.4	7.8
141	7.8	7.7	9.2	7.8	8.5	7.8
142	6.7	5.4	7.4	8.3	7.1	6.9
143	10.0	8.8	9.0	7.6	9.7	8.2
144	6.8	7.0	7.6	7.3	7.2	7.2
145	7.1	6.1	5.5	6.4	6.2	6.3

146	6.2	7.2	6.4	6.7	6.3	7.0
147	5.4	4.3	6.3	5.5	5.8	4.9
148	7.5	7.2	7.4	7.6	7.5	7.4
149	10.0	9.2	8.4	9.5	9.5	9.4
150	7.6	7.7	7.4	8.3	7.5	8.0
151	10.0	8.8	8.7	11.8	9.5	10.3
152	5.7	5.4	5.9	6.1	5.8	5.8
153	10.0	10.9	10.0	8.9	10.0	9.9
154	6.4	4.7	6.6	7.6	6.6	6.2
155	9.3	6.0	7.9	6.9	7.9	6.5
156	7.2	10.1	8.7	9.5	7.9	9.8
157	9.8	9.6	9.0	8.9	9.5	9.3
158	9.7	7.9	7.8	8.9	8.7	8.4
159	10.0	9.9	10.0	8.9	10.0	9.4
160	10.0	9.6	10.0	10.2	10.0	9.9
161	10.0	9.6	8.4	9.5	9.2	9.6
162	10.0	8.2	10.0	8.1	10.0	8.2
163	10.0	10.1	8.4	8.6	9.8	9.4
164	8.4	7.9	7.8	9.5	8.1	8.7
165	9.8	9.6	8.4	10.9	9.2	10.3
166	7.2	5.8	6.3	7.1	6.8	6.5
167	10.0	10.5	9.8	9.5	10.0	10.0
168	10.0	8.8	9.8	10.9	10.0	9.9
169	7.1	7.7	7.0	7.4	7.1	7.6
170	8.9	8.8	7.9	8.3	8.4	8.6
171	6.8	3.1	7.2	5.0	7.1	4.1
172	6.8	7.7	7.0	7.4	7.0	7.6
173	5.7	5.0	6.1	4.5	5.9	4.8
174	8.4	8.5	7.6	7.6	8.1	8.1
175	10.0	8.5	9.0	9.5	9.5	9.0
176	7.2	5.4	7.2	6.3	7.2	5.3
177	9.5	8.2	9.2	8.9	9.3	8.6
178	8.7	9.9	9.3	10.2	9.0	10.1
179	7.0	3.6	5.8	6.5	6.3	5.1
180	7.2	5.4	7.2	5.0	7.2	5.2
181	8.9	10.9	8.9	8.6	8.9	9.8
182	7.6	6.0	8.1	8.3	7.9	7.2
183	6.8	6.0	8.5	6.9	7.6	6.5
184	6.7	6.7	7.0	7.1	6.8	6.9
185	10.0	10.5	9.8	10.2	10.0	10.4
186	9.5	8.5	7.2	8.6	8.4	8.6
187	8.2	7.9	8.1	8.3	8.2	8.1
188	6.2	6.6	6.2	7.4	6.2	7.0
189	5.7	4.4	5.4	6.1	5.6	5.3
190	10.0	9.9	10.0	10.9	10.0	10.4
191	10.0	10.1	9.2	9.5	10.0	9.8
192	7.6	9.5	7.9	11.8	7.8	10.7
193	9.7	9.6	8.5	8.9	9.2	9.3
194	9.7	6.5	8.9	8.6	9.3	7.6
195	6.4	6.7	5.5	5.1	5.9	5.9
196	7.5	5.1	6.2	5.2	6.8	5.2

197	10.0	10.9	10.0	11.8	10.0	11.4
198	5.6	4.1	5.8	5.2	5.7	4.7
199	8.4	8.5	8.1	9.5	8.2	9.0
200	9.8	10.1	9.0	9.5	9.4	9.8
201	10.0	9.9	8.7	10.9	9.5	10.4
202	7.5	8.8	9.3	10.2	8.4	9.5
203	10.0	8.5	9.2	8.9	10.0	8.7
204	10.0	9.2	10.0	9.5	10.0	9.4
205	10.0	8.8	9.3	8.9	10.0	8.3
206	7.5	6.2	6.4	5.5	7.0	5.9
207	6.7	5.2	7.9	6.3	7.4	6.1
208	6.4	5.8	6.7	7.8	6.6	6.8
209	7.8	7.7	7.1	8.9	7.5	8.3
210	8.2	6.7	7.1	8.3	7.6	7.5
211	10.0	8.8	10.0	9.5	10.0	9.2
212	8.2	8.5	7.9	8.1	8.1	8.3
213	5.4	5.6	6.1	6.5	5.7	6.1
214	9.8	10.1	7.1	10.9	8.4	10.5
215	5.9	5.8	5.7	6.5	5.8	6.2
216	5.9	6.5	6.3	6.7	6.1	6.6

**RESULTS OBTAINED ON THE METROPOLITAN
READING ACHIEVEMENT TESTS
1932 and 1959**

Pupil	Para. Mean.		Vocab.		Total	
	1932	1959	1932	1959	1932	1959
1	8.4	10.0	8.3	10.0	8.4	10.0
2	7.8	10.0	7.8	10.0	7.8	10.0
3	6.7	5.7	7.2	9.8	7.0	7.8
4	7.8	10.0	7.9	10.0	7.9	10.0
5	8.1	9.7	7.9	7.9	8.0	8.8
6	8.5	10.0	8.3	10.0	8.4	10.0
7	6.5	5.9	6.6	7.1	6.6	6.5
8	7.8	10.0	7.3	8.3	7.6	10.0
9	9.0	10.0	8.1	10.0	8.6	10.0
10	6.7	9.7	7.0	7.1	7.9	8.4
11	7.3	6.9	6.7	6.4	7.0	6.2
12	7.4	8.7	8.3	10.0	7.9	10.0
13	8.1	8.7	7.3	10.0	7.7	9.4
14	7.5	7.3	6.0	8.7	6.8	8.0
15	8.4	10.0	8.5	10.0	8.5	10.0
16	7.7	10.0	7.6	10.0	7.7	10.0
17	6.5	7.1	7.4	10.0	7.0	8.6
18	8.0	10.0	8.3	10.0	8.2	10.0
19	7.3	8.4	6.7	7.9	7.0	8.2
20	7.3	6.6	6.5	7.4	6.9	7.0
21	8.4	5.7	8.0	8.7	8.2	7.2
22	7.9	10.0	7.2	8.7	7.6	9.4
23	7.5	9.7	6.7	9.8	7.1	9.8
24	6.9	10.0	7.4	10.0	7.2	10.0
25	7.3	10.0	7.4	9.2	7.4	10.0
26	8.3	10.0	8.1	9.8	8.2	10.0
27	7.7	7.3	7.1	8.3	7.4	7.8
28	7.7	9.7	7.4	9.2	7.6	9.5
29	4.8	5.9	6.3	5.3	5.6	5.6
30	8.3	10.0	8.1	10.0	8.2	10.0
31	4.9	4.4	5.3	3.3	5.1	3.9
32	7.2	8.7	7.2	8.7	7.2	8.7
33	8.4	10.0	8.0	8.3	8.2	10.0
34	8.3	10.0	8.3	10.0	8.3	10.0
35	7.1	7.1	8.2	10.0	7.7	10.0
36	7.5	7.1	8.5	10.0	8.0	10.0
37	8.4	8.4	7.8	9.2	8.1	8.8
38	7.0	7.3	7.2	8.7	7.1	8.0
39	8.0	8.7	7.6	10.0	7.8	10.0
40	8.8	10.0	8.2	10.0	8.5	10.0

41	8.3	10.0	7.9	10.0	8.1	10.0
42	7.3	9.2	7.9	10.0	7.6	10.0
43	8.5	10.0	8.2	10.0	8.4	10.0
44	6.8	5.7	6.9	8.7	6.9	7.2
45	6.9	8.0	7.0	9.2	7.0	8.6
46	7.4	8.7	7.8	10.0	7.6	10.0
47	8.3	10.0	7.6	8.3	8.0	10.0
48	8.1	10.0	8.1	10.0	8.1	10.0
49	6.5	8.4	7.8	10.0	7.2	10.0
50	7.8	10.0	7.8	10.0	7.8	10.0
51	7.0	8.7	7.9	8.3	7.5	8.5
52	7.7	9.2	7.2	7.9	7.5	8.6
53	6.8	5.7	6.6	7.9	6.7	6.8
54	5.6	4.4	6.2	6.6	5.9	5.5
55	8.5	10.0	8.1	10.0	8.3	10.0
56	6.3	7.3	6.9	7.9	6.6	7.6
57	7.0	6.3	6.7	8.7	6.9	7.5
58	6.3	6.3	6.4	5.8	6.4	6.1
59	8.0	10.0	7.5	10.0	7.8	10.0
60	7.9	9.2	6.8	6.9	7.4	8.1
61	7.9	9.2	7.4	7.1	7.7	8.2
62	7.8	8.4	7.3	8.7	7.6	8.6
63	6.7	5.9	6.6	6.6	6.7	6.3
64	6.8	6.1	7.0	9.2	6.9	7.7
65	8.8	10.0	7.8	10.0	8.3	10.0
66	6.0	8.0	5.7	5.8	5.9	6.9
67	7.1	8.0	7.2	7.9	7.2	8.0
68	7.5	6.3	6.8	7.9	7.2	7.1
69	7.4	8.7	7.9	10.0	7.7	10.0
70	5.3	4.9	6.2	5.1	5.8	5.0
71	5.1	3.5	6.3	5.8	5.7	4.7
72	6.8	9.2	7.0	8.7	6.9	9.0
73	7.2	4.4	6.8	6.2	7.0	5.3
74	7.3	9.7	6.3	10.0	6.8	9.9
75	5.8	6.1	6.6	6.2	6.2	6.2
76	5.2	5.7	5.8	4.5	5.5	5.1
77	7.8	10.0	7.9	8.3	7.9	9.2
78	8.0	10.0	8.5	10.0	8.3	10.0
79	7.8	10.0	8.2	10.0	8.0	10.0
80	7.4	6.6	7.8	9.8	7.6	8.2
81	8.0	10.0	7.9	10.0	8.0	10.0
82	7.5	9.7	7.6	8.7	7.6	9.2
83	6.6	8.0	6.8	6.9	6.7	7.0
84	5.8	4.5	6.1	5.5	6.0	5.0
85	8.0	10.0	8.0	10.0	8.0	10.0
86	7.1	6.3	6.8	8.3	7.0	7.3
87	7.9	9.7	7.9	10.0	7.9	10.0
88	7.4	10.0	7.4	9.2	7.4	9.6
89	7.4	10.0	7.0	10.0	7.2	10.0
90	7.1	8.4	6.8	6.2	7.0	7.3
91	5.6	5.1	6.8	6.2	6.2	5.7
92	5.4	6.6	6.3	5.8	5.9	6.2

93	8.1	10.0	8.5	10.0	8.3	10.0
94	5.9	5.9	6.5	6.6	6.2	6.3
95	6.3	5.7	7.1	7.9	6.7	6.8
96	6.9	9.7	7.2	8.7	7.1	9.2
97	7.1	9.2	7.2	7.1	7.2	8.2
98	7.2	8.7	8.0	7.4	7.6	8.1
99	7.7	9.2	7.9	10.0	7.8	10.0
100	5.3	4.5	6.8	6.2	6.1	5.4
101	6.1	9.7	7.4	7.1	6.8	8.4
102	4.9	4.5	4.7	4.3	4.8	4.4
103	7.9	8.7	7.6	10.0	7.8	10.0
104	7.0	9.2	7.3	10.0	7.2	10.0
105	5.9	6.3	7.4	8.3	6.7	7.3
106	6.1	8.6	7.6	7.4	6.9	8.1
107	6.5	10.0	6.5	7.9	6.5	10.0
108	5.7	7.1	6.9	7.1	6.3	7.1
109	5.1	3.8	6.4	6.2	5.8	5.0
110	8.4	10.0	8.0	7.4	8.2	8.7
111	4.8	4.5	4.5	3.6	4.7	4.1
112	5.1	7.1	6.6	6.2	5.9	6.7
113	5.3	7.3	6.8	5.5	6.1	6.4
114	8.5	10.0	7.9	10.0	8.2	10.0
115	7.4	7.3	6.5	8.3	7.0	7.8
116	7.7	10.0	8.1	10.0	7.9	10.0
117	7.4	8.4	7.8	9.8	7.6	9.1
118	6.1	7.3	7.3	6.2	6.7	6.8
119	8.4	10.0	7.9	9.2	8.2	10.0
120	6.8	7.3	7.6	7.1	7.2	7.2
121	7.3	9.7	7.5	10.0	7.4	9.9
122	8.5	10.0	8.1	10.0	8.3	10.0
123	6.4	6.1	5.3	5.5	5.9	5.8
124	7.4	7.3	7.3	7.4	7.4	7.4
125	8.8	5.3	5.6	3.3	5.2	4.3
126	7.1	7.3	6.3	5.5	6.7	6.4
127	6.9	7.3	7.2	10.0	7.1	10.0
128	8.3	10.0	8.2	10.0	8.3	10.0
129	8.7	10.0	8.2	7.4	8.5	10.0
130	8.4	8.0	7.6	9.2	8.0	8.6
131	5.9	7.1	7.2	8.3	6.6	7.7
132	8.1	10.0	7.6	9.8	7.9	10.0
133	7.9	9.7	8.0	8.3	8.0	9.0
134	6.7	8.0	6.5	5.8	6.6	6.9
135	7.2	10.0	7.4	6.2	7.3	10.0
136	6.8	8.7	7.4	10.0	7.1	9.4
137	7.3	8.7	6.9	9.2	7.1	9.0
138	8.1	10.0	8.3	10.0	8.2	10.0
139	8.4	10.0	8.0	10.0	8.2	10.0
140	5.6	7.1	6.9	8.3	6.3	7.7
141	5.5	10.0	7.5	9.2	6.5	9.6
142	6.0	6.1	7.1	6.2	6.6	6.2
143	7.5	8.7	7.3	10.0	7.4	9.4
144	5.7	6.3	6.8	7.9	6.3	7.1

145	5.5	4.4	6.3	5.5	5.9	5.0
146	6.3	5.7	6.2	6.2	6.3	6.0
147	5.4	4.9	5.4	4.9	5.4	4.9
148	6.6	7.3	6.7	7.9	6.7	7.6
149	7.0	10.0	7.6	8.3	7.3	10.0
150	7.2	6.6	6.6	6.6	6.9	6.6
151	8.4	10.0	7.8	10.0	8.1	10.0
152	4.9	4.9	6.1	5.5	5.5	5.2
153	8.3	10.0	8.2	10.0	8.3	10.0
154	5.6	7.1	6.6	6.9	6.1	7.0
155	6.4	6.3	6.4	7.1	6.4	6.7
156	6.9	10.0	7.9	10.0	7.4	10.0
157	7.3	10.0	7.6	10.0	7.5	10.0
158	7.8	6.6	7.1	9.8	7.5	10.0
159	7.2	9.7	8.3	9.8	7.8	9.8
160	8.3	10.0	8.3	10.0	8.3	10.0
161	8.4	10.0	7.8	8.7	8.1	10.0
162	7.8	10.0	8.1	10.0	8.0	10.0
163	8.3	10.0	8.3	9.8	8.3	10.0
164	6.7	8.4	7.3	9.8	7.0	9.1
165	7.7	10.0	8.5	10.0	8.1	10.0
166	6.5	4.4	7.2	6.0	6.9	5.2
167	8.1	10.0	8.5	10.0	8.3	10.0
168	8.0	10.0	7.9	10.0	8.0	10.0
169	6.6	8.0	7.1	7.1	6.9	7.6
170	6.6	8.4	7.4	10.0	7.0	10.0
171	5.9	4.7	6.4	5.3	6.2	5.0
172	7.1	8.0	6.2	6.2	6.7	7.1
173	4.9	3.7	5.2	4.0	5.1	3.9
174	6.8	8.0	8.0	7.9	7.4	8.0
175	8.3	10.0	7.9	10.0	8.1	10.0
176	7.1	6.6	6.9	6.0	7.0	6.3
177	8.1	8.7	7.5	9.8	7.8	9.3
178	8.1	10.0	8.0	10.0	8.1	10.0
179	7.2	4.9	6.3	5.8	6.8	5.4
180	5.6	5.1	6.8	7.4	6.2	6.3
181	8.1	10.0	7.6	10.0	7.9	10.0
182	7.5	10.0	6.8	8.3	7.2	9.2
183	6.4	6.1	6.9	7.1	6.7	6.6
184	6.3	6.3	6.2	7.4	6.3	6.9
185	8.5	10.0	8.2	10.0	8.4	10.0
186	7.3	9.2	7.8	8.3	7.6	8.8
187	7.2	8.7	6.9	8.3	7.1	8.5
188	6.1	4.4	6.8	5.5	6.5	5.0
189	4.8	4.7	5.7	5.3	5.3	5.0
190	8.5	10.0	8.3	10.0	8.4	10.0
191	8.7	10.0	8.4	10.0	8.6	10.0
192	7.7	10.0	8.0	10.0	7.9	10.0
193	7.7	10.0	7.5	10.0	7.6	10.0
194	6.8	8.4	8.2	8.3	7.5	8.4
195	6.1	4.9	6.2	4.9	6.2	4.9
196	6.3	5.9	5.9	5.5	6.1	5.7

197	8.5	10.0	8.3	10.0	8.4	10.0
198	4.8	3.5	5.7	4.9	5.3	4.2
199	8.4	6.3	7.4	10.0	7.9	10.0
200	8.0	10.0	8.2	10.0	8.1	10.0
201	8.5	10.0	8.3	10.0	8.4	10.0
202	7.8	10.0	8.1	10.0	8.0	10.0
203	7.9	9.7	7.6	10.0	7.8	10.0
204	8.7	10.0	8.1	10.0	8.4	10.0
205	8.1	10.0	8.2	10.0	8.2	10.0
206	6.7	6.1	6.9	6.2	6.8	6.2
207	6.7	5.7	7.0	5.3	6.9	5.5
208	7.2	6.6	6.9	7.1	7.1	6.9
209	6.4	8.4	7.0	7.6	6.7	8.0
210	7.5	8.4	7.2	7.1	7.4	7.8
211	8.3	10.0	7.6	8.3	8.0	10.0
212	7.8	8.7	7.8	7.9	7.8	8.2
213	6.6	6.6	6.7	5.6	6.7	6.1
214	7.9	10.0	8.3	10.0	8.1	10.0
215	5.6	5.9	5.8	5.6	5.7	5.8
216	5.9	5.7	6.9	7.1	6.4	6.4

APPENDIX II

New Stanford Reading Test

By TRUMAN L. KELLEY, GILES M. RUCH, and LEWIS M. TERMAN

TEST: FORM V

FOR GRADES 2-9

Name..... Grade..... Boy or girl.....

Age..... When is your next birthday?..... How old will you be then?.....

Name of school..... Date.....

Score	Read. Age	School ¹ Grade	Score	Read. Age	School ¹ Grade	Score	Read. Age	School ¹ Grade	Score	Read. Age	School ¹ Grade	Score	Read. Age	School ¹ Grade
120	19-2		100	15-8	9.7	80	12-6	6.7	60	10-8	4.7	40	9-3	3.4
119	18-11		99	15-6	9.5	79	12-4	6.6	59	10-7	4.6	39	9-2	3.4
118	18-8		98	15-4	9.3	78	12-3	6.4	58	10-6	4.6	38	9-1	3.3
117	18-5		97	15-2	9.2	77	12-2	6.3	57	10-6	4.5	37	9-0	3.3
116	18-2		96	15-0	9.0	76	12-0	6.2	56	10-5	4.4	36	8-11	3.2
115	17-11		95	14-10	8.9	75	11-11	6.1	55	10-4	4.4	35	8-10	3.2
114	17-8		94	14-8	8.7	74	11-10	6.0	54	10-3	4.3	34	8-9	3.1
113	17-6		93	14-6 ²	8.5	73	11-9	5.9	53	10-2	4.3	33	8-8	3.1
112	17-4		92	14-4	8.4	72	11-8	5.8	52	10-1	4.2	32	8-7	3.1
111	17-2		91	14-1	8.2	71	11-7	5.7	51	10-0	4.1	31	8-6	3.0
110	17-0		90	13-11	8.1	70	11-6	5.7	50	9-11	4.1	30	8-5	3.0
109	16-10		89	13-9	7.9	69	11-5	5.6	49	9-11	4.0	29	8-4	2.9
108	16-8		88	13-7	7.8	68	11-4	5.5	48	9-10	4.0	28	8-3	2.9
107	16-6		87	13-5	7.6	67	11-3	5.4	47	9-9	3.9	27	8-2	2.8
106	16-5		86	13-3	7.5	66	11-2	5.3	46	9-8	3.9	26	8-1	2.8
105	16-3		85	13-1	7.4	65	11-1	5.2	45	9-7	3.8	25	8-0	2.8
104	16-2		84	12-11	7.2	64	11-0	5.1	44	9-6	3.7	24	7-11	2.7
103	16-0		83	12-10	7.1	63	10-11	5.0	43	9-5	3.6	23	7-10	2.7
102	15-11	10.0	82	12-8	7.0	62	10-10	4.9	42	9-4	3.6	22	7-8	2.6
101	15-9	9.8	81	12-7	6.8	61	10-9	4.8	41	9-3	3.5	21	7-6	2.6
												20	7-5	2.6

¹ Grade defined as in the table in the Directions for Administering.

² Reading ages above this point are extrapolated values.

NOTE. Turn the book over to find Test 1, which begins on the last page.

TO THE EXAMINER. Do not administer this test without first reading carefully the Directions for Administering.

TEST	SCORE	READ. AGE	SCHOOL GRADE
Parag. Mean.			
Word Mean.			
Total (Average) Read. ¹			

¹ The Total Reading Score is the average of the scores on the two tests.

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TEST 1. READING: PARAGRAPH MEANING

DIRECTIONS: Write **JUST ONE WORD** on each dotted line.

SAMPLE:

Dick and Tom were playing ball in the field. Dick was throwing the ball and..... was trying to catch it.

1 Ned was crying because his pony had died. Just then a fairy appeared and asked him why he was so sad. "Because," said Ned, "my dear little.....is dead."

2-3 Christmas brought toys for all. There was a ball for Mary and a cart for Paul. When the children found the presents, they were very happy. Paul played with his..... and Mary with her.....all day.

4-5 Helen and Kate pulled their sled through the deep snow to the top of the hill and soon were coasting swiftly down again. They did this over and over. The.....was so deep that they found it hard work to drag the.....to the top.

6-7 A gray pussy saw a lark out in the field and thought it would make a fine dinner. "Come here, pretty lark," said the....., "and I will show you the bell that hangs on my neck." But the wise lark said he did not care to see the.....and flew away quickly.

8-9 A pretty squirrel once lived in a hollow tree near the window of a farmhouse. In the room where the window was, a little girl named Nellie lay sick. Every day the.....came to the window and chattered as though to keep.....from getting lonesome.

10-11 A grizzly bear had a home in the high peaks of the mountains. Four flocks of bighorn sheep occupied the same area but there never was any trouble between the.....and the.....

12-13-14 Sarah practices on the piano every morning while Tom tries to play tennis alone. One day Tom asked Sarah to play with him and she said, "I can't, it would make me sick to play." "Playing.....won't hurt you," said.....; "it's better for you than playing the.....so much."

Go right on to the next column.

15-16 An old fairy tale tells of a little girl who was cured of telling falsehoods. A wise fairy clasped a diamond necklace about the little girl's throat. Whenever she said anything that was not true, the diamonds turned to coal until the truth was told. This so shamed the.....that she finally learned to speak only the.....

17-18 Although Bert and John were brothers, they were not at all alike. John was big and strong and he had very few friends. On the other hand,.....was small and weak but he was.....by everyone.

19-20 The Eskimos sometimes live in homes made of blocks of ice. Since ice melts rapidly when exposed to a temperature above 32 degrees, it is necessary for the Eskimos to keep the temperature of the room below.....degrees to keep the house from.....

21-22-23 All animals have some way of defending themselves from attack. The lion has sharp teeth, the rhinoceros has a hide so thick that scarcely anything can pierce it, while the deer can jump and run with great speed. If a single animal had the lion's....., the rhinoceros' thick....., and the deer's ability to....., it would be hard to conquer.

24-25-26 Dumped into Ernest's corner of the attic are a roller skate and a much-read story-book. "Ernest likes me better than he likes you," said the skate. "Why, you poor skate, how mistaken you are," said the book. At this moment they heard from outdoors, "Come on, Ernest, let's scoot." The word "scoot" set the book's leaves a-trembling and sent a thrill of joy through the iron heart of the skate. But just then it began to rain hard, "Pitter-patter, pitter-patter," on the attic roof. This sent a thrill to the heart of the....., and a shudder to the heart of the..... Soon Ernest came in and said, "Where is that old.....of mine?"

27-28 Trout cannot live in water which is warmer than that of their cold native mountain streams, and they prefer flowing water to still water. In the government fish hatcheries the baby trout are kept in special tanks in which the water is kept.....and.....

Turn the page and go right on.

29-30 Johnny was walking down the sidewalk in a very peculiar way. He was saying, "If I step on a crack, I will break my back; if I step in the middle, I will feel fit as a fiddle." Hiswere not of the same length, because he was trying not to step on a

31-32 Leonardo da Vinci, the artist who painted "The Last Supper," also made important discoveries as a scientist. We do not often think of him as both.....and.....

33-34 In a certain village a ton of coal costs as much as a cord of wood, but it produces twice as much heat. Therefore the poor families in this village should be advised to burnrather than.....

35-36 Steel is made from iron and is therefore a manufactured product. Similarly brass is commonly made from copper and zinc. This explains why we never hear of.....and.....mines.

37-38 The Iroquois and many other tribes of Indians were very fond of war. However, the Papago Indians of Arizona prefer peace and quiet. The men sit lazily in the shade of their huts while the women weave baskets. It is hard to imagine the.....Indians going to war or.....hard.

39-40 Deciduous trees lose their leaves in winter, while evergreens, as their name implies, do not. Therefore, in forests composed oftrees the ground is less shaded in winter than is the case in forests whose trees are.....

41-42 There are many kinds or breeds of cattle, each one being of some special use to man. Jersey cows are not highly desirable for meat, but produce large quantities of rich milk. Hereford cattle have just the opposite characteristics. Consequently, if one wanted to produce beef, he would choose the.....rather than the.....breed.

43-44 All things considered, water is the most important factor that determines success or failure in agriculture. Temperature is frequently a limiting factor, but.....is much oftener than temperature thefactor.

Go right on to the next column.

45-46 "Prince," said the Sultan, "your condition can never be sufficiently deplored; no one can be more sensibly affected by your misfortune than I am. Never did anything so extraordinary befall any man! One thing only is wanting—revenge to which you are entitled; and I will omit nothing in my power to effect it." The.....expressed his gratitude and began to plan how he might secure theto which the Sultan thought he was entitled.

47-48 Ora and Anna Blackmore are twins. They have a sister, Helen, and two friends, Clara and Bessie. Write the names of two Blackmore girls who are not of the same age.and.....

49-50 When we hear of the Chinese wearing wooden shoes and eating with chopsticks, we think it very odd. A Chinaman would be just as surprised at our leather shoes and our table forks and spoons. The.....of any people appear.....to anyone not familiar with them.

51-52 A few yards away large birds were greedily feeding upon dead fish, regardless of our presence. They were buzzards, scavengers of our southern seacoasts. In spite of their being ugly and unmannered, we owe them a kind of respect, for we have learned to know they are among the best friends of dwellers in the tropic, disposing as they do of decaying.....which otherwise might be a menace to health.

53-54 Many gardeners plant perennial flowers in preference to annuals because the former will bloom for more than one season. Since nasturtium is an annual and hollyhock is a perennial, we can expect the.....will live longer than the.....

55-56 If I were writing about the rich, I should be inclined to divide them, according to their attitude toward life, into workers and parasites. The motto of the worker is, "I owe the world a life," and the motto of the.....is, "The.....owes me a living."

57-58 Man will risk as much for notoriety as for money. If this were not true, why would anyone risk his life by going over Niagara Falls in a barrel? Such a feat, even if successful, may bring the "hero" no....., but it is certain to bring him much.....

Go right on to the next page.

Number right	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Score	3	13	16	18	20	23	25	27	29	31	33	35	37	39	41	43	44	46	47	49	51	53	54	56	58	59	60	61	62	64	65	66	67	69	70	71	72	73	75	76	77

59-60-61 We have all seen iron subjected to hot fires and yet it did not burn. However, iron does "burn up" and this fact is demanding the attention of some of our greatest engineers. Iron combines very readily with oxygen to form iron oxide, known as rust. Oxidation is only a form of slow combustion. Consequently, if.....is not treated to.....oxidation it will soon.....

62-63 A nation composed of good homes is a good nation. The best homes teach their children high ideals and good habits which tend to prevent sickness, poverty, vice, or crime. Ahas few problems which would not be half cured if all.....were good ones.

64-65 One of the fundamental aims of silent reading is that of training each child to attain his highest level of achievement in speed without lowering his accuracy of comprehension. Neither..... norshould be developed at the expense of the other.

66-67 A membrane which permits the passage of water through it but which does not permit substances dissolved in water to pass is called a semi-permeable membrane. One which allows dissolved substances as well as.....to pass is amembrane.

68-69 We like to subdue. Boys like to go stamping through the woods, breaking their way through to new paths. Before this modern age, war and hunting offered opportunities for the fighting spirit. The lives of most of us today are more..... Modern conditions make little demand on our.....tendencies.

70-71 To pant for recognition, to yearn to impress one's personality upon one's fellow-men, is the essence of ambition. The ambitious person may think that he merely thirsts to "do something" or "be somebody," but really what he craves is to figure potently in the minds of others, to be greatly loved, admired, or feared. To reap even a great success which no onedoes not satisfy the yearnings of the.....individual.

Go right on to the next column.

72-73 Among the most characteristic and amazing properties of bacteria is their ability for rapid multiplication. It has been estimated that the descendants of one bacterium under continued favorable conditions would in two days number 281,500,000,000 and in three days weigh about 7,000 tons. Fortunately, under ordinary conditions.....does not proceed unchecked at such a.....

74-75 "Naïve" and "unsophisticated" are frequently confused. The former suggests a type of behavior which is artless, spontaneous, and free from restraints of custom. The latter implies fully as great lack of knowledge of social usage, and, in addition, conduct which is primitive and perchance inelegant. Thus, theyouth was the first to enter the car, and his.....little sister warmly kissed him in the presence of the king.

76-77 The production of bodily energy involves a chemical process. Animal energy is derived directly from food. All cell activity involves the expenditure of energy. Therefore allhave to be.....

78 Fundamentally, education depends upon the capacity of a person to profit by past experiences. Past situations modify present and future adjustments. Education in its broadest sense means acquiring experiences that serve to.....existing inherited or acquired tendencies of behavior.

79-80 Suppose that in a certain country the law provides that a will, to be a valid legal instrument, must be signed by the testator (maker) in the joint presence of at least two witnesses who must themselves sign the document in attestation of the testator's signature. Mr. Brown having drawn up a will in the morning calls in Mr. Smith to witness his signature and in the afternoon calls in Mr. Jones. Since Mr. Jones was not present in the morning, Mr. Brown again signs the will and Mr. Jones then signs it. This will is.....because the two witnesses.....witnessed the making of Mr. Brown's signature.

End of Test 1. Look over your work.

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80														
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134

TEST 2. READING: WORD MEANING

New Stanf. Read. V

DIRECTIONS: Draw a line under the word that makes the sentence true, as shown in the samples.

SAMPLES:

A rose is a
box flower home month river

A roof is found on a
book person rock house word

1 New York is the name of a
city person ride river school

2 A shining thing is
dull high bright warm wide

3 Silk is for
books dresses gardens horses letters

4 Joyful means
even great happy short slow

5 Tears come usually when we
drink eat talk walk cry

6 A horn makes
pictures plans suits music tears

7 A limb is a part of a
story table tree wall window

8 To stitch is to
reward sew starve suggest tempt

9 The ocean is
fire land paper water wood

10 To lift means to
raise begin drive laugh watch

11 Cotton is used for
clothes dinners notes wheels

12 An American is a
ball house person place table

13 A farmer works chiefly with
fish coal plants rocks wood

14 Beaches are found on a
barn coast cloak horse roof

15 A vessel is a
boat bow cloth forest lady

16 To pronounce is to
sail show speak stand watch

17 A couch is a kind of
bed captain offer pick wall

18 To be free is to have
luxury patience religion revenge

Go right on to the next column.

19 Frightful means discreet precise
enthusiastic terrifying vigorous

20 Clever means
bright neat peculiar stern upright

21 A snake is a foreigner
gallery geography mold serpent

22 To inquire is to
appear rest ask sleep watch

23 A remark is something that is
destroyed slow held kept said

24 To despise is to
bind effect hate obey observe

25 A parson is a
minister pond porch prison robin

26 A monstrous thing is
enormous modest musical useful torn

27 An argument is a discussion
gully gymnasium penance perjury

28 Injury means
charm experience haste harm limit

29 A misunderstanding is a kind of diadem
disagreement disk magnet monastery

30 To scare is to
sympathize tackle taunt terrify loan

31 A worshiper is domestic
fearful gracious religious steady

32 To sneer is to
scoff scorch scratch scream scrub

33 To be brave is to be humble
courageous frightful honorable ignoble

34 Contentment means notion
provision rainbow satisfaction trifle

35 Unarmed means advantageous
beggarly defenseless verbal wasteful

36 A purchaser is a
flatterer buyer flirt hearer voter

37 A sawmill produces
candy brides dew wire lumber

38 Commerce means
speed station trade uncle weather

39 To grant means to
get give see step wish

Go right on to the next page.

Number right		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Score		3	13	16	19	22	25	27	29	31	33	35	37	39	41	43	44	45	47	48	49	51	52	53	55	56	57	58	60	61	62	63	64	66	67	68	69	70	71	72	73	75

TEST 2. READING: WORD MEANING—Continued

- 40 Violence usually causes **benefit**
happiness harm knowledge respect
- 41 A literary person is a **champion**
driver robber founder writer
- 42 A cave is a
ballad dresser frontier grotto plea
- 43 An occupation is a kind of
bath luxury activity relative vein
- 44 Thou means her him me they you
- 45 To reveal is to
abuse disclose mess motor seek
- 46 Solemnity means **legibility**
magic neutrality seriousness untidiness
- 47 A ballot is used in **draining**
freezing grinding voting wrapping
- 48 Ambition means **aspiration**
frivolity loitering remorse slothful
- 49 To heed is to
escape fancy hurry notice prove
- 50 Lifeless means **inanimate**
indefinite infamous undecided untidy
- 51 Dignified means **lonely**
monstrous prominent spiritual stately
- 52 An opponent is an
owl antagonist officer outlaw inlet
- 53 Tumultuous is **boisterous**
hapless jocund lowly massy
- 54 Constancy means **grudge**
morsel rainfall steadfastness warfare
- 55 Eternally means **already**
always completely entirely squarely
- 56 Liberality means **promotion**
robbery reproof scandal generosity
- 57 A legacy is an
inheritance inscription ox ankle elf
- 58 A frenzy is a **county**
growth majority robber rage
- 59 To forbear means to
abstain knead ladle loan mimic

Go right on to the next column.

- 60 To be prompt is to be **formal**
frightful hospitable punctual purified
- 61 Capacity refers to
authority bloom climate habit volume
- 62 Shameful means **dispassionate**
immaterial naïve scandalous tractable
- 63 Romantic means **perverse**
sentimental shabby shameless spry
- 64 Meager means **exceptional**
scant suspicious trivial vertical
- 65 Indefinite means **congenial**
indebted lawless workmanship vague
- 66 To be elaborate is to be **artless**
complicated headstrong plain ignored
- 67 Ceaseless means **boisterous**
diminished discontented ended incessant
- 68 Unscrupulous means **dishonest**
vagrant voluntary willful zigzag
- 69 To sever is to
cut hurt jump tie twist
- 70 To quail is to
attack cower expand hunt retreat
- 71 Submissiveness means **daring**
cute heaviness wise meekness
- 72 Doleful means
molten nameless oriental vague rueful
- 73 An associate is an **adversary**
antagonist emigrant ensign ally
- 74 Covetous means **avaricious**
bountiful gaudy gray-headed harassed
- 75 A reprobate is one who is very **ugly**
cowardly wealthy wicked youthful
- 76 To impair is to
brand commend damage mingle scrape
- 77 Sluggish means **cadaverous**
inert loquacious spectral vertiginous
- 78 An insurrection is a **fugitive**
rebellion publication punishment hermit
- 79 Quiescent means **inactive**
angry perfect quick troublesome
- 80 Audacious means **absurd**
adverse casual daring hapless

End of Test 2. Look over your work.

STANFORD

*Intermediate
Reading Test*

FORM
LM

ACHIEVEMENT TEST

TRUMAN L. KELLEY • RICHARD MADDEN • ERIC F. GARDNER • LEWIS M. TERMAN • GILES M. RUCH

Intermediate Reading Test

for Use with Separate Answer Sheet

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TEST 1 *Paragraph Meaning*

2 ➔

DIRECTIONS: Read each paragraph below. Decide which of the numbered words at the right is best for each blank, and then mark the answer space that is numbered the same as the word you have chosen. Study the sample below, and answer the other questions in the same way.

SAMPLE: I am shorter than my sister and taller than my brother.
This morning we stood beside one another. I looked down
at my 51 and 52 at my sister.

- | | | |
|----|----------|-----------|
| 51 | 1 friend | 2 brother |
| | 3 sister | 4 feet |
| 52 | 5 around | 6 back |
| | 7 up | 8 down |

1-2 It was a lovely sunny morning. Bob and Betty were
happy as they piled baskets of good things to eat into the car.

1 were going on a 2.

- | | | |
|---|-------------|------------|
| 1 | 1 The girls | 2 The boys |
| | 3 They | 4 The men |
| 2 | 5 train | 6 boat |
| | 7 picnic | 8 horse |

3-4-5 The Smith family has three children: Jane, Ellen, and
Jim. Each child has a job to do every morning. Jane sets
the table. Jim sweeps the walk. 3 dries the dishes.

The 4 of the family work indoors and the boys work
5.

- | | | |
|---|-------------|------------|
| 3 | 1 Jane | 2 Ellen |
| | 3 Jim | 4 Mother |
| 4 | 5 girls | 6 boys |
| | 7 parents | 8 children |
| 5 | 9 hardest | 10 most |
| | 11 outdoors | 12 indoors |

6-7-8 An apiary is a place where bees are kept, and an aviary
is a place where birds are kept. John loves birds. Someday
he hopes to have his own 6. Tom keeps bees in his
7 and sells the honey made by his 8.

- | | | |
|---|-----------|------------|
| 6 | 1 hive | 2 home |
| | 3 aviary | 4 apiary |
| 7 | 5 garage | 6 apiary |
| | 7 bedroom | 8 aviary |
| 8 | 9 bees | 10 birds |
| | 11 pets | 12 flowers |

9-10 In our family there are Mother, Father, and two children.
We use three bottles of milk a day. Each child uses one
bottle a day. Mother and Father together use 9 10.

- | | | |
|----|----------|-----------|
| 9 | 1 no | 2 one |
| | 3 two | 4 three |
| 10 | 5 glass | 6 glasses |
| | 7 bottle | 8 bottles |

11-12-13-14 A non-conductor of electricity is a substance that
will not allow a current of electricity to pass through it. A
galvanometer is an instrument which registers the passage of
electrical current. Two wires run from a battery to the gal-
vanometer. If they are joined, closing the circuit, the dial
of the 11 shows that a current is passing. If we put
something between the wires, the electrical current still passes
in some cases but not in others. Thus, if we take a coin and
put the two wires in contact with it, the current continues to
pass because metal acts as a conductor of 12. On the
other hand, if we put a piece of glass between the 13, no
current passes. Glass, therefore, is called a 14.

- | | | |
|----|-----------------------|---------------------|
| 11 | 1 battery | 2 galva-
nometer |
| | 3 conductor | 4 clock |
| 12 | 5 heat | 6 electricity |
| | 7 sound | 8 energy |
| 13 | 9 coins | 10 instru-
ments |
| | 11 circuits | 12 wires |
| 14 | 13 non-con-
ductor | 14 non-
metal |
| | 15 barrier | 16 conductor |

15-16-17 There are many breeds of dogs, some of them useful to
man, others valuable simply as pets. Whippets can run very
fast; collies can be trained to herd sheep; setters can learn to
scent game; and terriers are fun to play with. Of these breeds,
Tom, who likes to hunt, would probably choose a 15.
Bud simply wants a dog that will run after a ball thrown for
him. He would like a 16. Don wants a racing dog; so
his choice would probably be a 17.

- | | | |
|----|-----------|------------|
| 15 | 1 whippet | 2 collie |
| | 3 setter | 4 terrier |
| 16 | 5 whippet | 6 collie |
| | 7 setter | 8 terrier |
| 17 | 9 whippet | 10 collie |
| | 11 setter | 12 terrier |

TEST 1 *Paragraph Meaning* (Continued)

18-19-20 Sugar comes from sugar cane and from sugar beets. The cane grows in warm climates and the beets in cooler regions. When we get sugar from Michigan or Colorado it has come from sugar 18, and when we get it from Louisiana or Hawaii it has come from sugar 19. Smithville produces much cane sugar. It has a 20 climate.

- | | | |
|----|------------|---------|
| 18 | 1 plants | 2 cane |
| | 3 farms | 4 beets |
| 19 | 5 plants | 6 cane |
| | 7 farms | 8 beets |
| 20 | 9 pleasant | 10 cool |
| | 11 good | 12 warm |

21-22 By means of certain tests devised by psychologists, educators are able to classify students according to their particular aptitudes. This is a great help to the 21 themselves, who are happiest and most successful doing work suited to their abilities. The tests are also of great assistance to 22 who wish to advise and guide their students.

- | | | |
|----|-------------|----------------------|
| 21 | 1 educators | 2 psycholo-
gists |
| | 3 boys | 4 students |
| 22 | 5 people | 6 teachers |
| | 7 women | 8 men |

23-24 We are indebted to Lister for the beginnings of the science of modern surgery. Lister is famous because he discovered the use of antiseptics to reduce wound infection. As a result of his work the 23 science of 24 has greatly broadened its scope.

- | | | |
|----|-----------|---------------------|
| 23 | 1 natural | 2 medical |
| | 3 social | 4 geological |
| 24 | 5 disease | 6 child care |
| | 7 surgery | 8 family
welfare |

25-26 In colonial days, and for some time after, the duel played a considerable part in American political and social life. If a man was insulted, he felt that he had to fight. The most famous of all American 25 was the tragic meeting of Alexander Hamilton and Aaron Burr, both prominent men. Pistols were used, and 26 killed Hamilton.

- | | | |
|----|-------------|-----------|
| 25 | 1 duels | 2 battles |
| | 3 struggles | 4 events |
| 26 | 5 they | 6 someone |
| | 7 Alexander | 8 Burr |

27-28 Women usually outnumber men in cities, but more men inhabit the rural areas. Farming offers more opportunities for employment to single men than to single women. Farmers' sons more often remain on farms than do daughters. The latter look for work in factories, offices, and stores. When 27 leave home, they are more likely to go to 28 than to rural communities.

- | | | |
|----|--------------------|------------------------|
| 27 | 1 boys | 2 young
children |
| | 3 girls | 4 older chil-
dren |
| 28 | 5 cities | 6 villages |
| | 7 farming
areas | 8 foreign
countries |

29-30 Long ago a sea extended over the lower part of the Mississippi Valley. Through thousands of years the river brought down earth and deposited it in the water until the 29 was filled and a great area of fertile 30 had been built up.

- | | | |
|----|-----------|----------|
| 29 | 1 ocean | 2 valley |
| | 3 river | 4 hole |
| 30 | 5 farms | 6 fields |
| | 7 gardens | 8 land |

31-32-33 The natives of Siam wager upon the outcome of fights between certain special fish. Two of these fish are placed in a large glass bowl where at first they swim about leisurely. Then one spies the other and his dark green body turns a brilliant red with purple spots. Then the other likewise turns 31 and they charge and countercharge for hours. Finally one tires, seeks the bottom of the bowl, and turns 32 again. The first fish that turns 33 is proclaimed the loser.

- | | | |
|-----|-----------|-------------------|
| 3 ➔ | | |
| 31 | 1 red | 2 red and purple |
| | 3 purple | 4 green |
| 32 | 5 red | 6 red and purple |
| | 7 purple | 8 green |
| 33 | 9 red | 10 red and purple |
| | 11 purple | 12 green |

34-35 Cotton seeds, which were formerly destroyed, are now used. The oil, the soft inner pulp, and the cellulose or tough fiber of the hulls all have value. The pulp is turned into cattle feed and fertilizer. The 34 is used to make paper. From the 35, cooking fats, soap, cosmetics, and other important substances are produced.

- | | | |
|----|-------------|-------------|
| 34 | 1 cellulose | 2 soft pulp |
| | 3 oil | 4 waste |
| 35 | 5 waste | 6 oil |
| | 7 soft pulp | 8 cellulose |

TEST 1 *Paragraph Meaning* (Continued)

36-37 The higher animals have many senses, including smell, taste, sight, and hearing. In human beings the sense of smell is not so keen as it is in many dogs and the sense of taste seems much less acute than it is in the rat. It appears that 36 are becoming less keen in human beings and that 37 are becoming more important.

- | | | |
|----|---------------------|-------------------|
| 36 | 1 smell and taste | 2 smell and sight |
| | 3 sight and hearing | 4 sight and taste |
| 37 | 5 smell and taste | 6 smell and sight |
| | 7 sight and hearing | 8 sight and taste |

38-39 The instruments of an orchestra are frequently put into three classes: strings; winds, wherein air vibrates in hollow wood or metal; and percussion instruments, wherein something is struck to produce a sound. One instrument, the 38, that has strings which are struck, is sometimes classed with the stringed and sometimes with the percussion instruments. If violins, trumpets, flutes, and clarinets are playing, we have 39 instruments.

- | | | |
|----|-------------------------|-------------------|
| 38 | 1 organ | 2 drum |
| | 3 mouth organ | 4 piano |
| 39 | 5 string | 6 wind |
| | 7 percussion and string | 8 string and wind |

40-41-42 Three great philosophers of ancient Greece are still honored by students everywhere. Socrates, the first of these, was put to death because of his teachings. Plato, a student of Socrates, taught the people what he had learned from this great 40. After Plato came Aristotle, an equally great 41, though he belonged to a different 42 from that of Socrates and Plato.

- | | | |
|----|--------------------|----------------------|
| 40 | 1 scientist | 2 dramatist |
| | 3 teacher | 4 statesman |
| 41 | 5 poet | 6 philosopher |
| | 7 dramatist | 8 martyr |
| 42 | 9 religion | 10 race |
| | 11 political party | 12 school of thought |

43-44-45 A biography is the life story of someone written by another person. When one writes the story of his own life, it is called an autobiography. Both words are to be distinguished from bibliography, which is merely a list of titles of publications on a given subject. Thus, Benjamin Franklin's book about himself is 43; Ridpath's life of James A. Garfield is 44; and the collected titles of writings about Lincoln is 45.

- | | | |
|----|--------------------|----------------|
| 43 | 1 an autobiography | 2 a history |
| | 3 a bibliography | 4 a biography |
| 44 | 5 an autobiography | 6 a history |
| | 7 a bibliography | 8 a biography |
| 45 | 9 an autobiography | 10 a history |
| | 11 a bibliography | 12 a biography |

46-47-48 If a scholar from ancient Greece could step into today's world, he would understand many of our modern words, including compound words, because they are combinations of words from his own language. For instance, in Greek "mega-" means great or mighty; "poly-" means many or much; "micro-" means small; "scope" means watching; "lith" means stone; and "chrome" means color. Therefore, the Greek would know that polychrome means 46; megalith, 47; and microscope, 48.

- | | | |
|----|--------------------------|-------------------------------|
| 46 | 1 great stone | 2 many colored |
| | 3 seeing something small | 4 watching stone |
| 47 | 5 great stone | 6 watching stone |
| | 7 small color | 8 seeing something small |
| 48 | 9 great stone | 10 watching stone |
| | 11 small color | 12 to look at something small |

Stop. 4 ➔

TEST 2 *Word Meaning*

5 →

DIRECTIONS: In each exercise decide which of the four numbered words will complete the sentence best. Look at the number of this word. Mark the answer space at the right that is numbered the same as the word you have chosen. Study the samples.

SAMPLES:

- 51 The day that comes after Friday is — 1 Monday 2 Tuesday 3 Saturday 4 Sunday 51
- 52 To draw on a blackboard, use a piece of — 5 pencil 6 straw 7 eraser 8 chalk 52
-
- 1 To save is to — 1 work 2 find 3 get 4 keep.....1
- 2 *Who, why, when, and where* are used when asking —
5 questions 6 help 7 people 8 money.....2
- 3 A beast is — 1 an enemy 2 an animal 3 a person 4 a bird.....3
- 4 To complete is to — 5 figure 6 guard 7 finish 8 play.....4
- 5 Moist means — 1 temperate 2 damp 3 weather 4 cold.....5
- 6 If a person fails, he is — 5 dull 6 bad 7 unsuccessful 8 proud.....6
- 7 People who cheat others are very — 1 naughty 2 clever 3 popular 4 lucky 7
- 8 To roam is to — 5 rent 6 reach 7 walk 8 wander.....8
- 9 To furnish means to — 1 finish 2 supply 3 teach 4 study.....9
- 10 If you were sad and now feel better, you are —
5 willing 6 smoothed 7 startled 8 cheered.....10
- 11 To permit is to — 1 allow 2 tell 3 refuse 4 submit.....11
- 12 People are most likely to say things they don't mean when they are —
5 honest 6 embarrassed 7 truthful 8 satisfied.....12
- 13 A pony that does what it is directed to do is —
1 mechanical 2 stupid 3 obedient 4 tough.....13
- 14 To labor is to — 5 hurry 6 promise 7 rule 8 work.....14
- 15 Hair that falls in smooth curves is — 1 whirling 2 rinsed 3 wavy 4 naturalized 15
- 16 One who has marks made from old wounds has —
5 scallops 6 scars 7 moles 8 carvings.....16
- 17 To manufacture is to — 1 make 2 sell 3 break 4 invent.....17
- 18 Any large ship is called a — 5 transport 6 model 7 vessel 8 friendship...18
- 19 If a boy looks like his sister, he —
1 fascinates her 2 reminds her 3 resembles her 4 repays her.....19
- 20 If a lady asks a favor and you do it, you —
5 neglect her 6 excite her 7 oblige her 8 limit her.....20
- 21 The amount of pull a rope will stand is its — 1 power 2 honor 3 strength 4 shortage 21
- 22 An invention is — 5 a machine 6 an idea 7 a patent 8 a new design.....22
- 23 If you own a bicycle, it is your — 1 possession 2 privilege 3 reward 4 treatment 23

TEST 2 *Word Meaning* (Continued)

- 24 A person told something is — 5 enclosed 6 envied 7 informed 8 suspected 24
- 25 People are liked best when they spend very little time finding —
1 fault 2 qualities 3 acquaintances 4 pleasures 25
- 26 Water runs out of a pan with a tiny hole in the bottom —
5 immediately 6 gradually 7 promptly 8 hurriedly 26
- 27 You can expect poor results if you are usually —
1 cooperative 2 complaining 3 agreeable 4 assisting 27
- 28 A kind of very hard rock is — 5 granite 6 mantle 7 balcony 8 legend 28
- 29 To show something is to — 1 conceal it 2 overlook it 3 review it 4 display it 29
- 30 Any strange and spooky sight is — 5 weird 6 volcanic 7 a torture 8 a sacrifice 30
- 31 People who are on time are — 1 orderly 2 devoted 3 prompt 4 agreeable 31
- 32 Thin strips of bright metal used as ornaments are —
5 pennants 6 penguins 7 tenants 8 tinsel 32
- 33 The correct word for a narrow passageway between two large bodies of water is a —
1 kink 2 crevice 3 rivet 4 strait 33
- 34 A commotion is — 5 an advancement 6 a disturbance 7 a settlement 8 an agreement 34
- 35 Water flowing in a special direction is a — 1 wave 2 tide 3 breaker 4 current 35
- 36 A man who weighs 350 pounds is —
5 exceedingly fat 6 properly fat 7 moderately fat 8 approximately fat 36
- 37 If you obtain something, you — 1 exchange it 2 acquire it 3 improve it 4 injure it 37
- 38 If something you own is the first one of its kind, you own the —
5 standard 6 treasure 7 usual 8 original 38
- 39 Statements that are nonsense are — 1 sensible 2 absurd 3 brilliant 4 patriotic 39
- 40 If only one person can do a thing, it can be done by —
5 somebody 6 nobody 7 everybody 8 anybody 40
- 41 When the right thing is said at the right time, it is —
1 democratic 2 appropriate 3 conscientious 4 vulgar 41
- 42 The clothes most people wear on a hot day at the beach are —
5 numerous 6 solemn 7 melancholy 8 scanty 42
- 43 A top's spinning round is called — 1 relation 2 rotation 3 circumference 4 circulation 43
- 44 Any official government record is a — 5 document 6 treaty 7 charter 8 security 44
- 45 Magazines, newspapers, and books are all —
1 stationery 2 publications 3 memorandums 4 subscriptions 45
- 46 To feel wretched is to be — 5 miserable 6 uncomfortable 7 itchy 8 fretful 46
- 47 "Best suited" means —
1 fortunate 2 economical 3 ideal 4 legal 47
- 48 An all-powerful king is a — 5 triumph 6 monarch 7 procession 8 conquest 48

Stop. 6 ➔

METROPOLITAN ACHIEVEMENT TESTS

INTERMEDIATE READING TEST: FORM A

(Revised)

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**Inter.
 Read.**

A

(Revised)

For Grades 4, 5, and 6

Name..... Date.....19...

Grade.....Age....yrs....mos. Teacher.....

School..... City..... State.....

TEST	SCORE	GRADE EQUIVA- LENT	AGE EQUIVA- LENT
1. Reading			
2. Vocabulary			
Average Reading			

Metropolitan Reading Test: Intermediate
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TEST 1. READING

Directions. In each paragraph a blank line means that a word has been left out. Read each paragraph. Then think of the word that should be in each blank. Write the word *in the parentheses at the side of the page*. You should get the answer from the paragraph itself.

Sample. Dick, Tom, and Fred are brothers. The names of Dick's brothers are (a) _____) a
and (b) (_____) b

1. Betty's father made a little house for her. He made small chairs and a table to put in the (1) (_____) 1

2. Much of Holland is lower than the sea. The people of Holland have built walls, called "dikes," to keep the (2) from flooding the land. (_____) 2

3-4. Grapes are grown in those parts of France where the climate is not cold. The best region for grapes is around the Mediterranean Sea to the west of the Rhone River. We know that the climate of that area (_____) 3
is not (3), since (4) are grown there. (_____) 4

5-6. Fred likes to play ball. Helen likes to read. They were both happy when Uncle Ned brought a book (_____) 5
for (5) and a ball for (6) (_____) 6

7-9. Cod are caught by the use of a long line floating on the water. Fastened to this line are short lines with (_____) 7
baited hooks. The (7) eats the bait and is caught by (_____) 8
the (8). Fishermen row along the line and take off (_____) 8
the fish which have been (9) (_____) 9

10-11. The Eskimos wear warm clothing because it is very cold where they live. When aviators fly high above the earth, they know that the air will be very cold. Therefore, when an (10) plans to rise high in the air, (_____) 10
he wears the kind of clothes that the (11) wear. (_____) 11

12-13. The storekeeper needs us, and we need him. The (12) needs us to buy his goods. We need the (13) (_____) 12
so that we can have the things we wish. (_____) 13

14. The mountains keep the cold north winds from reaching southern Europe. Therefore the winters are mild in the (14) part of Europe. (_____) 14

15-16. Sacajawea, the woman who guided Lewis and Clark to the Northwest, was born in Montana. There was her home. When still young, she was captured and (_____) 15
taken East. But she never forgot the way to her (15).
That was why she was able to (16) Lewis and Clark. (_____) 16

17-18. The reindeer is used by the Lapps to carry burdens in summer and to pull sledges in winter. The reindeer also provides the Lapps with milk and meat. () 17
The (17), then, use the (18) for both food and work. () 18

19-20. With our modern methods of transportation, it is difficult for us to imagine the hardships of the Western pioneer. On land the (19) depended on a kind () 19
of covered wagon. On (20) he used the flatboat. . . . () 20

21-22. The life of a trapper in the forest is a lonely one. The country is wild. He may travel for days through trackless forests without ever seeing a (21). () 21
Only the shrill cry of some (22) breaks the stillness. . . () 22

23. Abe Lincoln's reading interfered with his work. This was no discredit to him; nor was it a (23) to his father, living under pioneer conditions, that he did not appreciate the value of reading. . . . () 23

24-25. When the United States was young, there was a struggle between the common people and the aristocracy. Jackson was the first President who was neither a cultured gentleman nor a member of a wealthy family. His election was a victory of the (24) people () 24
over the (25). . . . () 25

26-28. It was a very queer street, all twisted and crooked, more like a country road than a city street. But the people in it were even stranger. Dick was not surprised at anything the women wore; but to see the () 26
(26) dressed in doublet and hose was too much. He () 27
began to laugh, but when he saw that he (27) was wearing a doublet and hose, it no longer seemed so (28). . . () 28

29-30. In colonial days punishment of crime was meant to warn others as well as to punish the (29). () 29
When a lawbreaker was to be (30), the town crier would invite "all good people" to come to witness the sight. () 30

31-32. In 1902 Colombia refused to let the United States build a canal across Panama. At that time Panama belonged to Colombia. Naturally the people of (31) were disappointed. They knew the (32) would () 31
be of great advantage to them. . . . () 32

33-34. Conditions in cities have made the supply of gas, and more recently the supply of electricity, almost as essential as the supply of water. (33) has largely () 33
taken the place of gas as a means of lighting, but as a fuel (34) is still used in very large quantities. . . . () 34

35-38. Nuthatches eat insects that injure trees. A nuthatch once broke open an acorn and apparently ate () 35 it. When the bird had flown away, the (35) was examined. Some of it had been eaten, but not recently. () 36 Something besides the (36) had been feeding on the acorn. The nuthatch had eaten not the (37) but a () 37 (38) that was in it. () 38

39-40. When the moon passes between us and a star, the star would become dim before disappearing if the moon were surrounded by air. Instead of that, the (39) () 39 remains bright until the instant the moon hides it. We therefore conclude that the moon has no (40) surrounding it. () 40

41-42. People are too much inclined to compromise. They want their rights presented to them by someone else. They don't want to (41) for them. They don't () 41 realize that securing the (42) means resisting the wrong. () 42

Directions. Read each paragraph. Then read the questions below it. Write the answer to each question *in the parentheses after it*. You may read the paragraph again if you wish to. Each question can be answered by one word or, at most, a few words. You should get the answer to each question from the paragraph itself.

Soft coal burns easily. It is not hard to start a soft-coal fire. A little burning kindling soon sets the coal on fire. Soft coal burns with a bright flame. It often gives off thick clouds of black smoke. A large amount of ashes is left when soft coal is burned.

Hard coal is not easily broken into pieces. It is not as dirty as soft coal. The coal is hard to start burning. More kindling is needed to set hard coal burning than soft coal. Hard coal burns with little smoke. It gives a very hot fire. Not many ashes are left after hard coal is burned.

- 43. Which kind of coal leaves most ashes? () 43
- 44. Which kind of coal burns with most smoke? () 44
- 45. Which kind of coal is cleaner? () 45
- 46. Which kind of coal is harder to start burning? () 46

The speckled sky is dim with snow, The light flakes falter and fall slow; Athwart the hilltop, rapt and pale, Silent drops a silver veil; And all the valley is shut in	By flickering curtains gray and thin. But cheerily the chickadee Singeth to me on fence and tree; The snow sails round him as he sings, White as the down on angels' wings.
---	---

- 47. What word tells you that the sky is not bright? () 47
- 48. What is the bird doing? () 48
- 49. How does the chickadee feel? () 49
- 50. Where is the chickadee? () 50

Canals can be dug in almost any level plain, but they cost so much that it pays to build a canal only where there is sure to be a large amount of freight. Canal traffic is always slow; for if fast steamboats were used, the waves which they cause would soon wear away the banks and fill the canals. Often barges are used in great numbers, and are slowly drawn by tugboats, horses, donkeys, or even men. In densely populated plains like those of China, Japan, and Europe, even such slow transportation by inland waterways is important.

- 51. How do boats usually travel in canals?.....(_____) 51
- 52. What kind of boats should *not* be used in canals?..(_____) 52
- 53. What is the name of the kind of boat that is used to carry freight in canals?.....(_____) 53
- 54. What would be injured if boats moved rapidly in canals?.....(_____) 54
- 55. What must be made sure of before a canal is built?..(_____) 55

The tulip tree is a favorite with lumbermen, not only because the trunks are long and straight but also because they are "clean" to a great height. By a clean trunk is meant one that is free from limbs, so that the lumber made from it will be free from knots; for knots appear in the wood where limbs grow out from the trunk of a tree.

- 56. What are there in trunks of trees that make them poor for lumber?.....(_____) 56
- 57. By whom is the tulip tree liked, according to the paragraph?.....(_____) 57
- 58. If you see many knots in lumber, what do you know about the tree from which the lumber was made?..(_____) 58
- 59. The trunk of a tree is "clean" if it has no (?) for a great height above the ground.....(_____) 59
- 60. Besides being "clean," why is the tulip-tree trunk good for lumber?.....(_____) 60

As the sugar in a maple tree is manufactured by the leaves, it passes down from the leaves into the trunk and roots of the tree, and is stored in the living cells of these parts in the form of starch. Then when food is needed in the spring to enable the buds to grow and expand into blossoms and leaves, and to produce the seeds, the starch is changed back to sugar, which is dissolved out of the storage cells and carried upward in the sap.

- 61. What things do the buds on the tree change to?....(_____) 61
- 62. What does the sugar change to in the tree?.....(_____) 62
- 63. What part of the tree makes the sugar?.....(_____) 63
- 64. During what season is the starch stored in the tree without being used?.....(_____) 64

STOP!

No. RIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Score	16	17	17	18	19	19	20	20	21	21	22	22	23	23	24	25	25	26	26	27	28	28	29	30	30	31	31	32	33	33	34	35	36	36
No. RIGHT	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64				
Score	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	57	58	59	60	61	63	64	65	67	68	70				

No. attempted..... No. wrong..... [5] Number right..... Score, Test 1.....

TEST 2. VOCABULARY

Directions. In the parentheses after each question write the number of the word that makes the sentence true.

Sample. *Big* means the same as — 1 bad 2 pretty 3 large 4 tiny()

1. *Ahead* means — 1 below 2 in front of 3 between 4 above... () 1
2. *Sad* means — 1 unhappy 2 lovely 3 gay 4 fearful () 2
3. To be *seen* means to be — 1 blind 2 served 3 looked at 4 broken () 3
4. He *told* means he — 1 spoke 2 cried 3 met 4 touched..... () 4
5. To be *strong* is to be — 1 selfish 2 strange 3 proud 4 powerful () 5
6. To *discover* means to — 1 know 2 find out 3 close 4 consider () 6
7. *Sprang* is the same as — 1 leaped 2 rode 3 rang 4 walked . () 7
8. *Freedom* means — 1 revolution 2 war 3 liberty 4 American. () 8
9. To *pretend* is to — 1 work 2 make believe 3 meet 4 frighten () 9
10. *Single* refers to — 1 many 2 all 3 both 4 one () 10
11. *Huge* best describes an — 1 apple 2 ant 3 elephant 4 elf.. () 11
12. To be *polite* is to be — 1 wise 2 skillful 3 courteous 4 happy () 12
13. To *join* means to — 1 enjoy 2 connect 3 travel 4 note () 13
14. To *plan* is to — 1 smooth 2 scheme 3 plant 4 cover..... () 14
15. To *live* means to — 1 like 2 dwell 3 play 4 wake () 15
16. To be *felt* is to be — 1 hard 2 struck 3 pushed 4 touched . () 16
17. To *spy* is to — 1 steal 2 hide 3 quarrel 4 watch secretly .. () 17
18. *Laughter* refers to — 1 business 2 dishonor 3 order 4 merriment () 18
19. *Horror* means — 1 fear 2 honor 3 honesty 4 strength..... () 19
20. To *tease* is to — 1 rip 2 fight 3 annoy 4 drink () 20
21. She *replies* means she — 1 complains 2 demands 3 fills 4 answers () 21
22. To *astonish* is to — 1 surprise 2 annoy 3 sadden 4 forget .. () 22
23. *Value* means — 1 progress 2 effort 3 worth 4 vanity () 23
24. To *furnish* is to — 1 buy 2 provide 3 spend 4 have () 24
25. *Weather* refers to — 1 climate 2 calendar 3 doubt 4 seashore () 25
26. A *mountain* is part of — 1 a city 2 the earth 3 the sea 4 a hill () 26
27. *Dangerous* means — 1 courageous 2 healthy 3 careful 4 perilous () 27
28. *From* means — 1 toward 2 to 3 out of 4 into () 28
29. *New* means — 1 recent 2 nice 3 smart 4 noisy () 29
30. A *supply* is a — 1 need 2 help 3 prayer 4 quantity () 30
31. To *shield* means to — 1 arm 2 shift 3 conflict 4 protect ... () 31
32. *Peace* means — 1 part 2 scorn 3 loyalty 4 calm () 32
33. To *appear* means to — 1 seem 2 vanish 3 blame 4 soften .. () 33

34. *Courage* means — 1 indifference 2 loyalty 3 bravery 4 patience() 34
35. To *depend* is to — 1 rely 2 race 3 fear 4 help() 35
36. To be *patient* is to be — 1 ill 2 evident 3 uncomplaining 4 rude() 36
37. *Furious* describes a — 1 building 2 storm 3 story 4 picture.() 37
38. To *tax* means to — 1 charge 2 teach 3 disappear 4 collect.() 38
39. A *message* is a — 1 rule 2 communication, 3 tree 4 paper ..() 39
40. To *compare* is to — 1 grumble 2 finish 3 direct 4 liken() 40
41. To *dream* is to — 1 wake 2 plan 3 fear 4 fancy() 41
42. An *idea* is a — 1 date 2 panic 3 thought 4 statue.....() 42
43. A *stubborn* boy is — 1 studious 2 forgiving 3 obstinate 4 strong() 43
44. He *warns* means he — 1 heats 2 endangers 3 trusts 4 cautions() 44
45. To *long for* means to — 1 extend 2 crave 3 look 4 envy ... () 45
46. *Probably* means — 1 surely 2 exactly 3 likely 4 assuredly..() 46
47. The *effect* means the — 1 exertion 2 declaration 3 concern 4 result() 47
48. To *admit* is to — 1 proceed 2 acknowledge 3 conduct 4 warm() 48
49. I *defeat* means I — 1 reduce 2 overcome 3 defend 4 dare..() 49
50. To *plead* means to — 1 appeal 2 fold 3 promise 4 pretend() 50
51. To *relieve* means to — 1 ease 2 abandon 3 remedy 4 taste() 51
52. To *consider* means to — 1 agree 2 decide 3 think over 4 send() 52
53. To *lack* means to — 1 lose 2 need 3 tire 4 grieve() 53
54. A *fault* is — 1 a defect 2 a fairy 3 a dread 4 an accident... () 54
55. A *prospect* is an — 1 outlook 2 esteem 3 examination 4 attack() 55
56. *Intention* means — 1 purpose 2 indifference 3 consideration
4 discovery() 56
57. To *refresh* means to — 1 bend 2 freeze 3 invigorate 4 enroll() 57
58. A *refuge* is a — 1 remedy 2 rubbish 3 debt 4 retreat() 58
59. *Thus* means — 1 rarely 2 and 3 so 4 however() 59
60. *Devotion* means — 1 hope 2 affection 3 suffrage 4 ambition() 60
61. A *conference* is a — 1 federation 2 discussion 3 conflict 4 speech() 61
62. *Vigilance* means — 1 triumph 2 power 3 irregularity 4 watchfulness() 62
63. *Ample* means — 1 rare 2 amber 3 brilliant 4 sufficient.....() 63
64. To *prolong* is to — 1 shorten 2 encourage 3 lengthen 4 precede() 64
65. *Leisure* means — 1 ease 2 sport 3 work 4 contentment() 65

.STOP!

No. RIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Score	13	14	14	15	16	16	17	18	18	19	19	20	21	21	22	22	23	24	24	25	26	27	27	28	29	29	30	31	32	32	33	34	34	35
No. RIGHT	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65			
Score	36	37	37	38	39	40	41	42	43	43	44	45	46	47	48	49	50	51	52	53	54	55	56	58	59	60	61	62	63	65	66			

No. attempted..... No. wrong..... [7] Number right..... Score, Test 2.....

**INTERMEDIATE
READING
TEST**

Metropolitan Achievement Tests

NAME _____
Last Name First Name Initial

BOY GIRL GRADE _____ TEACHER _____

SCHOOL _____ DATE OF TESTING _____
Year Month Day

CITY OR TOWN _____ DATE OF BIRTH _____
Year Month Day

STATE _____ AGE _____
Years Months

SCORE BOX

TEST	WORD KNOW.	READING
RAW SCORE		
STAND. SCORE		
STANINE		
GRADE EQUIV.		
%-ILE RANK		

World Book Company

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DIRECTIONS

In each of the exercises below read the beginning part of the sentence, paying particular attention to the underlined word in **heavy black letters**. Then choose the word which best completes the sentence.

(Specific directions for marking your answers will be read to you by your examiner.)

SAMPLE A shrub is a . . . [a] tree [b] vine [c] bush [d] branch [e] shrug

- | | | | | | |
|--|----------------|-----------------|---------------|----------------|----------------|
| 1 A <u>command</u> is | [a] a leader | [b] an order | [c] a speech | [d] a letter | [e] an answer |
| 2 A <u>meadow</u> is a | [f] plant | [g] ruler | [h] palace | [i] garden | [j] field |
| 3 A <u>robe</u> is a | [a] garment | [b] stocking | [c] hat | [d] suit | [e] box |
| 4 <u>Dirty</u> means | [f] torn | [g] wet | [h] soft | [i] rough | [j] soiled |
| 5 A <u>scent</u> is a | [a] noise | [b] food | [c] smell | [d] coin | [e] sight |
| 6 To <u>nip</u> is to | [f] pry | [g] pinch | [h] pull | [i] push | [j] punch |
| 7 A <u>fig</u> is a | [a] dance | [b] statue | [c] fruit | [d] shape | [e] fight |
| 8 <u>Vanished</u> means | [f] finished | [g] dropped | [h] secret | [i] gone | [j] magic |
| 9 To <u>drain</u> is to | [a] flow | [b] act | [c] empty | [d] drink | [e] press |
| 10 To <u>attempt</u> is to | [f] awake | [g] try | [h] jump | [i] leave | [j] gain |
| 11 <u>Quantity</u> means | [a] question | [b] height | [c] position | [d] strength | [e] amount |
| 12 <u>Nuisance</u> means | [f] annoyance | [g] children | [h] sickness | [i] help | [j] joy |
| 13 <u>Grand</u> means | [a] splendid | [b] happy | [c] slow | [d] gay | [e] funny |
| 14 <u>Textiles</u> are | [f] clocks | [g] temples | [h] fabrics | [i] cities | [j] books |
| 15 <u>Ferns</u> are | [a] animals | [b] plants | [c] swamps | [d] rivers | [e] woods |
| 16 <u>Broth</u> is | [f] a relative | [g] a pin | [h] foam | [i] a soup | [j] a color |
| 17 <u>Respectfully</u> means | [a] similarly | [b] richly | [c] privately | [d] politely | [e] naturally |
| 18 <u>Calm</u> means | [f] usual | [g] quiet | [h] pure | [i] strong | [j] slow |
| 19 To <u>arrest</u> is to | [a] run | [b] keep | [c] arrive | [d] seize | [e] speak |
| 20 <u>Privileges</u> are | [f] gifts | [g] goals | [h] obstacles | [i] advantages | [j] secrets |
| 21 To <u>dart</u> is to | [a] dare | [b] damage | [c] dash | [d] deal | [e] decide |
| 22 A <u>prospector</u> is | [f] a miser | [g] an explorer | [h] a story | [i] a genius | [j] a rifleman |
| 23 <u>Dizzy</u> means | [a] happy | [b] fussy | [c] funny | [d] sorry | [e] giddy |
| 24 <u>Thaw</u> means | [f] flow | [g] melt | [h] thread | [i] thrash | [j] fling |
| 25 A <u>system</u> is | [a] a method | [b] a matter | [c] an idea | [d] a subject | [e] a success |

- 26 Parades are [f] movies [g] circuses [h] displays [i] dances [j] services
- 27 A handicap is a [a] handbag [b] haze [c] hat [d] disadvantage [e] handkerchief
- 28 Amber is a [f] lake [g] country [h] color [i] food [j] place
- 29 To increase is to [a] grow [b] build [c] buy [d] pay [e] visit
- 30 A skipper is a [f] jailer [g] janitor [h] peasant [i] pauper [j] master
- 31 Security means [a] protection [b] thrift [c] betrayal [d] exposure [e] affection
- 32 Extraordinary means [f] remarkable [g] profuse [h] frequent [i] legitimate [j] just
- 33 Exercise means [a] learning [b] reading [c] strength [d] health [e] practice
- 34 To ascend is to [f] smell [g] feel [h] rise [i] alarm [j] conquer
- 35 Hoarse means [a] hopeful [b] horrible [c] human [d] harsh [e] humble
- 36 Yearning means [f] loving [g] laboring [h] laughing [i] learning [j] longing
- 37 An incident is [a] a passage [b] an event [c] a venture [d] an instant [e] a dispute
- 38 An intention is [f] a glimpse [g] a move [h] a hunt [i] an instrument [j] a purpose
- 39 A hem is a [a] song [b] head [c] meat [d] border [e] passenger
- 40 Grim means [f] solid [g] stern [h] smart [i] sloping [j] smiling
- 41 Compliment means [a] giver [b] position [c] praise [d] power [e] competition
- 42 A marvel is a [f] wonder [g] place [h] stone [i] marriage [j] painting
- 43 Fluster means [a] enmity [b] trouble [c] doubt [d] confusion [e] laughter
- 44 A pillar is a [f] berry [g] cloth [h] column [i] medicine [j] paddle
- 45 To communicate is to [a] listen [b] know [c] hope [d] wish [e] tell
- 46 Former means [f] past [g] new [h] still [i] pleasant [j] dark
- 47 Relatives are [a] kindred [b] kennels [c] knaves [d] kingdoms [e] kinks
- 48 A benediction is a [f] bargain [g] blessing [h] battleship [i] belfry [j] barbarity
- 49 To crumple is to [a] hustle [b] destroy [c] wrinkle [d] falter [e] sample
- 50 To coincide is to [f] enter [g] agree [h] pass [i] freeze [j] argue
- 51 A decoy is a [a] storm [b] victim [c] wage [d] lure [e] plan
- 52 Superiority means [f] excellence [g] abundance [h] bravery [i] charity [j] dismay
- 53 A clot is a [a] mite [b] bed [c] quart [d] ranch [e] lump
- 54 Evident means [f] quick [g] normal [h] bent [i] clear [j] noble
- 55 Suspense is [a] confidence [b] difficulty [c] suspicion [d] support [e] anxiety



DIRECTIONS

Read each story. Then read each question below the story. You are to find the best answer to each question. Notice that certain questions refer to particular words in the story. These words can be found in the lines which have the stars (★) beside them.

(Specific directions for marking your answers will be read to you by your examiner.)

SAMPLE

Frank has a good hobby. He collects stamps. He has stamps from many ★ different places. Of course, he has many United States stamps. He saves them from the letters he gets from his Aunt Carrie in Texas and his Cousin Jack in Ohio. But Frank also has stamps from foreign countries.

A Frank's Aunt Carrie lives in —

- | | |
|------------|--------------|
| [a] Ohio | [b] New York |
| [c] Africa | [d] Texas |

B In this story, the word saves means —

- | | |
|-------------|--------------|
| [e] rescues | [f] protects |
| [g] keeps | [h] prevents |

I

As they fly through the night, bats almost never bump into anything. Nature takes care of these creatures who live in dark places. When a bat flies, it makes a high pitched sound that people cannot hear. The sound makes an echo which comes back to the bat. The bat can tell how close it is to any

★ object by the echo. In this way a bat can guide its flight in total darkness.

1 This story shows that bats must have a good sense of —

- | | |
|-------------|-----------|
| [a] hearing | [b] sight |
| [c] feeling | [d] smell |

2 In this story, the word object means —

- | | |
|--------------|-------------|
| [e] thing | [f] purpose |
| [g] disagree | [h] aim |

3 People cannot hear the noises bats make because the sounds are too —

- | | |
|----------|----------|
| [a] high | [b] low |
| [c] soft | [d] weak |

4 When a loud echo comes back, the bat will probably —

- | |
|------------------------|
| [e] stop flying |
| [f] change direction |
| [g] quit making sounds |
| [h] bounce up |

5 The best name for this story is —

- | |
|----------------------------------|
| [a] Listen to the Echo |
| [b] How Bats Fly in the Darkness |
| [c] Song of the Bat |
| [d] Bats |

II

The famous American author, Louisa May Alcott, recorded this episode from her childhood:

"I was sorry I had left. I felt that home was a nice place after all, and tried to find it. I dimly remember watching a lamplighter as I sat to rest on some doorsteps in Bedford Street. A big dog welcomed me so kindly that I fell asleep with my head pillowed on his curly back, and was found there by the ★ town crier, whom my distracted parents had sent in search of me. His bell and proclamation of a little girl, six years old, in a pink frock, white hat, and new green shoes, woke me up, and a small voice answered out of the darkness, "Why, dat's me!"

6 Who woke Louisa up?

- | | |
|---------------------|--------------------|
| [a] a dog | [b] her parents |
| [c] the lamplighter | [d] the town crier |

7 The best name for this story is —

- | |
|-----------------------------|
| [e] A Happy Little Girl |
| [f] The Town Crier |
| [g] From Louisa's Childhood |
| [h] A Kindly Dog |

8 We learn from the last sentence that Louisa was not yet able to —

- | | |
|-------------------|------------------------|
| [a] have a pet | [b] understand English |
| [c] speak plainly | [d] go home |

9 In this story, the word distracted means —

- | |
|--------------------------|
| [e] twisted out of shape |
| [f] drew away attention |
| [g] very worried |
| [h] insane |

The highest mountain in California is Mount Whitney, located in the High Sierras. The sheer rise of 14,495 feet presents a formidable view to the would-be climber from the east side of the mountain. Yet this is probably one of our most accessible mountains, for on its western side it can be scaled by a rather gentle slope. Those who attempt this lofty peak are sure to be surprised by the fact that Mount Whitney's summit is flat and almost as large as Yankee Stadium. Moreover, because the trail is relatively easy to follow, the climber is most likely to find himself in the company of many other climbers. Sometimes, on weekends, the crowd is so thick that climbers must wait in line to sign the United States National Park Service Register.

III

- 10 The best name for this story is —
 [a] Over the Top
 [b] Mountain Climbing
 [c] The Sierras
 [d] California's Highest Mountain
- 11 The top of Mount Whitney is —
 [e] flat [f] pointed
 [g] inaccessible [h] dangerous
- 12 Mount Whitney is located in a —
 [a] wilderness [b] crowded area
 [c] national park [d] sports stadium
- 13 What word best describes Mount Whitney?
 [e] peculiar [f] thick
 [g] lofty [h] impossible
- 14 Most climbers scale Mount Whitney from the —
 [a] north [b] south
 [c] east [d] west

Copenhagen, seaport capital of Denmark, is called the "Paris of the North," because it is the gayest and most hospitable of the Scandinavian cities. It seems that everyone smiles in Copenhagen. Bright lights glitter from myriad restaurants and from Tivoli, the world's best-known amusement park. Soldiers with bearskin caps parade outside the Royal Palace at noon. The postmen wear brilliant red tunics and pretty girls in billowing skirts bicycle through the city streets. Strange, that so vivid a people should live in so bleak a climate! On the sunniest days, the blue of the sky remains pale and glassy. The salt air usually contains a slight nip. But, somehow, one doesn't notice it in a land where the houses are painted warm pinks and blues and yellows and where good cheer seems always to reign.

IV

- 15 The story shows that people in Copenhagen often travel by —
 [a] automobile [b] bicycle
 [c] airplane [d] gondola
- 16 A visitor to Copenhagen would probably —
 [e] get lost [f] feel lonesome
 [g] enjoy himself [h] become rich
- 17 In this story, the word remains means —
 [a] endures [b] outlives
 [c] survives [d] stays
- 18 Tivoli is a famous —
 [e] restaurant [f] palace
 [g] city [h] park
- 19 Which of the following words best describes the people of Copenhagen?
 [a] strange [b] myriad
 [c] friendly [d] pale
- 20 The dreariest thing in Copenhagen is the —
 [e] climate [f] transportation
 [g] people's dress [h] city streets
- 21 The best name for this story is —
 [a] Hospitable Scandinavia
 [b] Happy Copenhagen
 [c] Copenhagen and Paris
 [d] A European Capital
- 22 The capital of Denmark is located near the —
 [e] center of the country
 [f] ocean
 [g] capital of France
 [h] mountains

V

In any department store one may find simulated pearls strung into beautiful necklaces and bracelets. These may range in price from less than a dollar to a great many dollars. But even the best of simulated pearls can never approach in value the true gem that is the product of the oyster. The luster, the color of the real pearl, cannot be exactly duplicated.

The pearl oyster is usually found in tropical seas. This small, shelled creature has several accomplishments. From its body it secretes a whitish limy substance which it uses to form its own shell. The oyster has a very soft body and builds its shell for protection. The inside of the shell is shiny and iridescent and is called mother-of-pearl.

The oyster does not form pearls because it wishes to create something beautiful. Sometimes a small object — a bit of sand, a speck of some kind — gets into the oyster's shell and refuses to be dislodged. The speck irritates the soft flesh of the oyster, and to ease its distress, the oyster begins to surround the object with the same mother-of-pearl substance that it used in making its shell. It covers the object with layer after layer of the substance, hoping to put a stop to the irritation. After a long time a pearl is formed.

23 An oyster's flesh is very —

- [a] tender
- [b] pretty
- [c] sandy
- [d] hot

24 The best title for this story is —

- [e] The Iridescent Oyster
- [f] The Making of a Pearl
- [g] A Pearl of Great Price
- [h] Ladies' Necklaces

25 The pearls formed by the oyster would most likely be found —

- [a] inside the soft body
- [b] between the soft body and the shell
- [c] fastened to the outside of the shell
- [d] in the water near the shell

26 In this article, the word ease means —

- [e] rest
- [f] slow
- [g] reduce
- [h] shift

27 An oyster will make a pearl only when the oyster is —

- [a] in tropical seas
- [b] iridescent
- [c] hurt
- [d] soft-bodied

28 The story suggests that simulated pearls differ from real pearls in —

- [e] shape and luster
- [f] shape and color
- [g] size and cost
- [h] color and brilliance

29 The story shows that an oyster can increase its secretion when it —

- [a] is in warm water
- [b] has mother-of-pearl inside the shell
- [c] is soft-bodied
- [d] needs to

VI

Late one afternoon in 1827 the townsfolk of New Orleans, Louisiana, were, as customarily, wending their individual ways home when a bell sounded and sudden havoc ensued. Through the old French Quarter thronged a host of young merrymakers, masked and costumed, and armed with playful weapons such as fistfuls of flour and straw-filled stockings with which they proceeded to belabor the poor unprepared townspeople. The revellers, bent on enlivening a drab day, shrieked gleefully as they clanged cowbells and blasted horns to the distress of timid souls but to the delight of most of the citizens who soon joined in the spirit of the ruckus-making skylarkers. Then, as suddenly as they had come, the masqueraders disappeared. They were the guests at a masked ball, who, by prearranged decision, had combined to give the less fortunate citizens a taste of their fun. So it was that Mardi Gras was born.

Mardi Gras is the French name for Shrove Tuesday, the day preceding the solemn penitential season of Lent. Every year since 1827 on that day, a similar fete has taken place in New Orleans. In 1872, the festival was officially recognized by the Louisiana legislature. Now Mardi Gras is a festival of such splendor that visitors come from everywhere. Rex, the king of the festival during the day, leads a series of dazzling floats through the streets of New Orleans to the thunderous applause of the watching crowds. Comus, lord of the mirthful night, leads a torchlight parade, his courtiers tossing trinkets to the costumed merrymakers until finally the night is over and Mardi Gras is ended.

30 The Mardi Gras festival is most nearly like the celebration of —

- [a] Washington's Birthday
- [b] Labor Day
- [c] Halloween
- [d] Armed Forces Day

31 The Mardi Gras festival was made official in —

- [e] 1827
- [f] 1872
- [g] 1956
- [h] 1927

32 In this story, the word individual means —

- [a] person
- [b] separate
- [c] single
- [d] distinct

33 In this story, the word blasted means —

- [e] withered
- [f] destroyed
- [g] blared
- [h] blew up

34 The best title for this story is —

- [a] Lent is Here
- [b] Long Ago in 1827
- [c] Mardi Gras in France
- [d] A Festival of Fun

35 This story shows that high spirits are likely to be —

- [e] infectious
- [f] dangerous
- [g] misunderstood
- [h] mysterious

VII

On Sunday, December 21, 1879, the *New York Herald* bore exciting headlines. It told of the imminent first public exhibition of Thomas Edison's newest invention, "the great inventor's triumph in electric illumination." Throughout the civilized world, scientists and laymen eagerly awaited the day. In keeping with this mood of anticipation, the *Herald* undertook to "present to its readers a full and accurate account of Edison's work from its inception to its completion."

"Edison's electric light, incredible as it may appear, is produced from a little piece of paper — a tiny strip of paper that a breath would blow away. Through this little strip of paper is passed an electric current, and the result is a bright, beautiful light, like the mellow sunset of an Italian autumn.

"'But paper instantly burns, even under the trifling heat of a tallow candle' exclaims the skeptic, 'and how, then, can it withstand the fierce heat of an electric current?' Very true, but Edison makes the little piece of paper more infusible than platinum, more durable than granite. And this involves no complicated process. The paper is merely baked in an oven until all its elements have passed away except its carbon framework. The latter is then placed in a glass globe connected with wires leading to the electricity-producing machine, and the air exhausted from the globe. Then the apparatus is ready to give out a light that produces no deleterious gases, no smoke, no offensive odors — giving out but little heat, vitiating no air, and free from all flickering; a light that is a little globe of sunshine, a veritable Aladdin's lamp. And this light, the inventor claims, can be produced cheaper than that from the cheapest oil . . ."

36 Before this story appeared in the newspaper, Edison was already famous as —

- [a] a teacher
- [b] an inventor
- [c] a writer
- [d] an industrialist

37 We can assume that the exhibition was attended by —

- [e] scientists and inventors only
- [f] newspaper reporters only
- [g] skeptics and scientists only
- [h] many people from all walks of life

38 Scientists eagerly awaited the day of the public exhibition because they were probably —

- [a] amused
- [b] skeptical
- [c] afraid
- [d] curious

39 Edison's first step in preparing the paper for use in his new device was to —

- [e] bake it
- [f] pass an electric current through it
- [g] put it in a glass globe
- [h] attach wires to it

40 In this story, the word exhausted means —

- [a] worn out
- [b] burned
- [c] removed
- [d] extended

41 A characteristic of previous lighting systems that might have been injurious to health was their tendency to —

- [e] require too many matches
- [f] give off certain gases
- [g] produce excessive heat
- [h] burn with a low flame

42 The best title for this story is —

- [a] A New Era in Lighting
- [b] The Great Inventor
- [c] A Little Globe of Sunshine
- [d] The *Herald's* Account

43 This story shows that in 1879 newspapers were interested in —

- [e] presenting timely events
- [f] publicizing inventors
- [g] advertising public exhibitions
- [h] fighting gas companies

44 The purpose of the newspaper article was to —

- [a] describe an inventive wizard
- [b] show how electricity works
- [c] explain how the light bulb was developed
- [d] encourage people to install electric lights

