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Diagnostic study of reading abilities in special classes and suggestions for the improvement of difficulties

Andrus, Ruth Marguerite

Boston University

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Boston University
Boston University
School of Education

A Service Paper

Submitted by

Ruth Marguerite Andrus
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First Reader Helen B. Sullivan, Associate Professor of Education

Second Reader Helen A. Murphy, Assistant Professor of Education
Gift of M. Andreas
School of Economics
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DIAGNOSTIC STUDY OF READING ABILITIES IN SPECIAL CLASSES

AND

SUGGESTIONS FOR THE IMPROVEMENT OF DIFFICULTIES
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CHAPTER I

INTRODUCTION
CHAPTER I

The Elementary Special Classes in Brockton included about fifty boys and girls of chronological ages eight years and five months to fifteen years eight months. The I.Q. range was from fifty-one to ninety-six, resulting in mental ages of five years and five months to twelve years and three months. The writer wished to study the reading abilities of these children. The plan was to find where they were reading, if it were the best they could do; if not, how much retardation and why, and what should be done to increase their progress.

It is no longer expected that a child with a chronological age of ten be doing fifth grade work when his mental age is eight years old. Baker says,

It is now necessary to face the long and hard task to recognize the true nature of ability and that the schools are not able to exercise any magical process by which children become more intelligent. On the contrary, it is necessary to evaluate children's abilities and plan education suitable to the abilities. Such a system implies that every level of ability shall have a suitable curriculum. 1/

[Text from the image]
An individual intelligence test together with a thorough personal knowledge of the child determined his ability level in general. A Reading Capacity Test fixed the level at which he was capable of reading. Most children on entering school are anxious to read. It opens up a new field for pleasure. It gives them a feeling of mental growth. It is an accepted accomplishment of our social order. With materials now used in schools, learning to read is a magical process to the majority of children. But not so with those whose mental functions are slower and less imaginative.

Reading is a complex mental activity - one that involves recognizing visual symbols; associating them with sound symbols; translating these sound symbols into words, words into phrases, sentences and sustained thought patterns reflecting on their meaning; relating them to concepts and experiences acquired earlier; applying what is read to one's mode of thinking and acting; and, moreover, doing all these things more or less simultaneously, with smooth, even rhythmical rapidity.

In working with these children one realizes this complexity. Dolch points out that first the details of the


3/ Donald D. Durrell and Helen Blair Sullivan, Reading Capacity Test, Primary Form A. (Yonkers-on-Hudson, New York: World Book Company, 1937)

of the words are brought into consciousness and than by practice they are rendered unconscious again. 5/

This service paper was an endeavor to study the problems of each of these children so that interpreting the printed page might be as far as possible a mechanical process and their mental functions might dwell on the thought of the message.

CHAPTER II

SUMMARY OF RELATED READINGS
CHAPTER II

SUMMARY OF RELATED READINGS

A great deal of research has been done in the field of reading. We were concerned here with the reading of slow-learning children. Reading errors of these children are no different from those of normal children, but they are more numerous. 1/

Children start to school when they reach approximately a six year old chronological age. The majority start to read soon after entering school. Some learn easily and some have to put a great deal of effort into it. Lewis 2/ has found that the slow children are more apt to read up to their mental level than others because of social pressure and teachers' urging. The bright children are able to compete with little effort.

Farr 3/ tried to devise a method of evaluating rate of learning. She built tests to check this but found that her tests were no better than others. With her tests, the rate


3/ C. V. Farr, "Construction and Evaluation of Tests of Rate of Learning in Reading for Children in the First Grade," (unpublished Master's thesis, Boston University, Boston, 1942) p. 31
of learning depended upon the number of words taught. Farr stated that no test gave a reliable prediction.

The mental ages of two children may be equal but still the rate of learning will not be the same. Dr. Hollingworth 4/ reports the findings of an experiment at the State School for Feeble-Minded in Minnesota. Two groups, one with the average chronological age of fifteen years and the second with the average chronological age of nine years and both groups with the same mental age. Over a period of thirteen days they sorted gun wads. These were labeled in five different ways. At the end of thirteen days the results were about equal.

Hollingworth 5/ also reports a study made at the Pennsylvania School for Feeble-Minded. First the ability of the selected children was determined by Educational Measurements. It was known from these tests what normal children could do in a year. The subjects' progress was noted. These children learned much less. The study of academic subjects was much more complex than sorting gun wads.

Speech defects are common among children of low intelligence.

"The lower the intelligence, the fewer cases of normal speech. Correction was unsuccessful below the moron grade with a minimum mental age of five years, six months. Types of


5/ Hollingworth, op. cit., pp. 177-179
speech defects in order of frequency were: sound substitutions and defective phonation from habit, lisping, monophasia, lalling, organic, stammering, voice disorder, stuttering and bradyphasia. 6/

Bijou 7/ found indication that the range and quality of vocabulary of brain-injured mentally retarded children is superior to that of mentally retarded children of the familial type.

Visual and auditory discrimination have been found to correlate highly with ability to read. 8/ Junkins 9/ showed that ability to see likenesses and differences improve with teaching. Murphy proved the same with auditory discrimination. 10/


8/ Allan Acomb, "A Study of Psychological Factors in Reading and Spelling," (unpublished Master's thesis, Boston University, Boston, 1936) p. 87


10/ Helen Murphy, "Evaluation of Exercises for Developing Auditory Discrimination in Beginning Reading," (unpublished Master's thesis, Boston University, Boston, 1940) p. 68
Oversized special class children are often given books too difficult because books on their level seem too immature. In Pearson's thesis 11/ she stated that many of the oral reading difficulties occurred when reading material was beyond the pupil's level. Given the right material until fluency is established, a pupil might be prevented from forming poor reading habits. Postel 12/ experimented with rewriting materials of high interest level. The progress was much more rapid.

Much has been done to discover if, and how, poor reading lowers the Binet score. Kavruck 13/ worked with two groups of fifty each. One group read up to level. The other was retarded two years. Retarded readers were inferior to others in vocabulary, in defining abstract words, in the Minkus Completion and in assembling dissecting sentences. Memory of retarded readers were somewhat better. Vocabulary and abstract words did not require reading but better readers did better.

11/ A. R. Pearson, "Diagnostic Study of Third Grade Reading Difficulties in the Second Grade," (unpublished Master's thesis, Boston University, Boston, 1942) p. 44


Spencer's study on the effect of reading disability on the performance of the Terman-Merrill Revision of the Stanford-Binet Intelligence Test showed the percentage of the boys was higher on the complete scale. Boys missed reading items more than girls.

Rhodes studied the reading difficulties of poor readers. She found the causes to be: poor language habits, lack of general experience, little or no interest in reading, poor home environment and reading material too difficult.

Duffy studied the reading difficulties of third grade children. The types did not seem to vary at different levels but there were many more errors on the lower intelligence levels.

The difficult mechanical process of reading is emphasized again in the thesis of Joney. Children had rather

14/ Doris Spencer, "The Effect of Reading Disability on Performances of the Terman-Merrill Revision of the Stanford-Binet Intelligence Tests," (Unpublished Master's Thesis, Boston University, Boston, 1942) pp. 49

15/ Charlotte D. Rhodes, "Diagnostic Study of Third Grade Reading Difficulties with Suggestions for Remedial Instruction," (Unpublished Master's Thesis, Texas College of Arts and Industries, Kingsville, Texas, 1940)

16/ Duffy, op. cit. pp. 63

17/ O. L. Joney, "Comparison of Reading and Listening in Teaching Factual Materials in Grade Four," (Unpublished Master's thesis, Boston University, Boston, 1942) pp. 46
listen than read themselves. Poor readers show a preference for hearing. Good readers showed a preference for hearing, but not so great.

The results of these studies and many others helped to interpret the results of this study and make suggestions for the improvement of reading.
CHAPTER III

PLAN OF THE STUDY
CHAPTER III

PLAN OF THE STUDY

The purpose of this study was to find out what the abilities of these children were, if they were using that ability to the best advantage, and, if they were not, what should be done about it. The plan was as follows:

A. Each child was given the Revised Stanford-Binet Test of Intelligence. 1/ This gave the mental age and the intelligence quotient of each child. The mental age gave the approximate level at which he should be working in all things and the intelligence quotient gave some idea of the speed with which he could learn.

Each child was given a Durrell-Sullivan Reading Capacity Test (Primary Test: Form A). 2/ This gave the level at which he should be able to read. Also, the author was interested in reading ages derived from this test to compare with the Binet mental ages.

No standard reading achievement test was given. It was felt that these handicapped children would benefit by an individual test where reactions could be noted more carefully.

1/ Lewis M. Terman and Maud A. Merrill, News Revised Stanford - Binet Tests of Intelligence (Boston: Houghton Mifflin Company, 1937)

2/ Donald D. Durrell and Helen Blair Sullivan, Reading Capacity Test, Primary Test, Form A. (Yonkers-on-Hudson, New York: World Book Company, 1937)
B. Each child was checked on several items usually designated as reading readiness skills. Most of these children were already reading so they are noted here as "Pre-requisites to Good Reading". These skills were not mastered by all readers, and they were hampered by lack of these skills.

   a. The following letters were printed on 3" X 5" flashcards:

   | d | b |
   | p | v |
   | l | n |

   These letters are often confused with each other and with similar letters. Each of these six letters were one of a row of six. They were to encircle when the teacher flashed the card.

   b. For the second part of the Visual Perception Test words were used. The following words were printed on flash cards:

   - boy
   - play
   - come
   - had
   - donkey
   - stone
   - chair
   - doorstep
   - house
   - through

   Each word was chosen carefully. The first, boy, contained only three letters.
They increased in difficulty, some with similar beginnings, some with similar endings, and some easily confused in the middle part of the word.

2. Auditory Perception

   a. The children's papers were numbered from one to twenty. The numbers were grouped in four sections. Words were dictated:

      1. For the first six the children were to write the first letter of words given.
      2. In the next six words the children were to write the last letter.
      3. In the next four the children wrote the first two letter sounds or blends.
      4. In the last four they wrote the last two letter sounds or blends.

   b. In the second part of the Auditory Perception Test the children were asked to encircle words on their paper as the teacher pronounced them.

   Here, as in the Visual Perception Test, some were easily confused one syllable words, some longer words with like beginnings and some with like endings.


   On the children's papers were printed the sentences:

   He can not run or play
The jelly is very sweet on bread.

This contained nineteen different letters; forty-three in all. For scoring, two points were allowed for each letter and punctuation and ten points for neatness. Either script or cursive writing was acceptable. The children were given a minute and a half to copy it.

4. Articulation.

On a sheet of paper were four removable pictures. The teacher selected one and ask the child to tell about it. Four pictures were used so that they could be rotated and no child would be repeating what his predecessor had said. This was to check grammar, sentence structure, imagination and breadth of experience.

Nine words and phrases were chosen to check speech. Memory span and substitution of letters, dipthongs and syllables were checked.

C. To test reading achievement story cards with illustrative pictures were built. On one side of the card was an illustrated story for oral reading, on the other side an illustrated story for silent reading. The levels were from Primer through the fifth grade. These stories were about
sixty words in length. Each story was carefully built using Gate's Primary Reading Vocabulary. Whenever it seemed advisable to use proper names, simple phonetic names were used.

Directions for the reading test were to first choose the supposed reading level of the child. Have him read aloud. The teacher checked the child's oral reading errors on the child's own sheet where the story was duplicated. The following errors were checked:

- words unknown
- words mispronounced
- words skipped
- words inserted by reader
- phrasing
- words repeated

If the child made seven or more errors, he was put back one level.

The child was then asked to tell as much of the story as he could remember. On the child's individual sheet the teacher checked under "Unaided Recall" the questions he answered as he told as much of the story as he could recall without prompting. Questions unanswered in this way were asked by the teacher.

The child was then given the silent story of the same level. As he read, the teacher checked his lip movements, attention and speed of reading.

---

3/ A. I. Gates, A Reading Vocabulary For the Primary Grades. (New York: Bureau of Publications, Teachers College)
On finishing the story, he was asked to tell all that he could remember. Questions he answered in this way were checked. Questions unanswered spontaneously were asked the child, and these correct answers checked in the proper column. If he could not answer five questions with aid or he did not persist in his task, he was given one level lower.
CHAPTER IV

FINDINGS
CHAPTER IV.

FINDINGS

Fifty-two children in three elementary special classes were studied. The procedure for the study was as follows:

1. Each child was given a Stanford-Binet test.1/
2. Each child was given a Durrell-Sullivan Capacity Test.2/
3. Each child was given an individual silent and oral achievement reading test built by the author. The vocabulary was carefully controlled by the use of a standardized word list.3/ Unaided and aided recall was checked on both the oral and silent reading test.
4. Visual perception was checked with words and letters. Auditory perception was tested for beginning of words, endings of words and for complete words.
5. Motor control was checked by means of a writing test.

2/ Donald D. Durrell and Helen Blair Sullivan, "Reading Capacity Test, Primary Test, Form A, (World Book Company, Yonkers-on-Hudson, 1937)
3/ A. I. Gates, A Reading Vocabulary For the Primary Grades (Bureau of Publications, Teachers College, Columbia University, New York City, 1935)
In this section, I will discuss the role of technology in modern society. With the advent of the Internet and mobile devices, people are increasingly connected and informed. This has led to a shift in how information is consumed and shared. As a result, the role of traditional media has diminished, while social media platforms have become dominant. Furthermore, the use of technology in education and healthcare has transformed these industries, making them more accessible and efficient. However, this technological revolution has also raised concerns about privacy and security, as well as the potential for it to exacerbate social inequalities.
6. The children were asked to describe a picture so that their fluency in speaking and breadth of experience could be checked.

7. Individual oral tests with certain words checked any difficulty with sound substitutions and memory span.

Table I gives the complete data on all cases tested.
### Table I

**Information for Diagnosis of Reading Difficulties of 52 Cases from Elementary Special Classes**

<table>
<thead>
<tr>
<th>Case No.</th>
<th>1, 2, 3, 4, 5, 6</th>
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<th>Fair</th>
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(0 R.Q. = questions answered, 0 N.Q. = questions asked)
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<td>7.5 7.8 7.2 7.4 7.6</td>
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<td>65.5 60.5 57.7 59.3 62.9</td>
<td>65.5 60.5 57.7 59.3 62.9</td>
<td>65.5 60.5 57.7 59.3 62.9</td>
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<td>P P P E E E</td>
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<td><strong>Silent</strong></td>
<td>0 I II I I 0 I</td>
<td>I II 0 0 P I I</td>
<td>P P P E E E</td>
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<td><strong>55 O.K. 55 O.K. 55 O.K.</strong></td>
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<td>Reading</td>
<td>Fast</td>
<td>Fast</td>
<td>Slow</td>
</tr>
<tr>
<td>Lips</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
</tr>
<tr>
<td>Attention</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Oral Reading</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Written Reading</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
</tbody>
</table>

**TABLE I, Continued**
The chronological ages ranged from eight through fifteen. Table II gives the number of children at each chronological age level and the average I. Q. at that level. The largest number, fifteen, falls at the twelve year age level. There are but two at the eight year level and two at the fifteen year level. The highest I. Q. average, 78, is at the eleven year level. The lowest I. Q. average, 55, is at the fifteen year level.
TABLE II

NUMBER OF CHILDREN AND AVERAGE I. Q. AT EACH CHRONOLOGICAL AGE LEVEL

<table>
<thead>
<tr>
<th>Chronological Age</th>
<th>No. of Children At This Level</th>
<th>Average I. Q.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>70</td>
</tr>
<tr>
<td>11</td>
<td>9</td>
<td>78</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
<td>74</td>
</tr>
<tr>
<td>13</td>
<td>8</td>
<td>76</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>55</td>
</tr>
</tbody>
</table>
Table III lists the frequency distribution of the I. Q.'s. Nearly fifty-eight per cent of the cases have I. Q.'s between sixty-five and eighty. There were only five cases below sixty. There were only four cases whose I. Q. was over ninety. The greatest number, eleven, came between seventy and eighty.
TABLE III

FREQUENCY DISTRIBUTION OF INTELLIGENCE QUOTIENTS

<table>
<thead>
<tr>
<th>I. Q. Level</th>
<th>Number of Subjects At Each Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-55</td>
<td>3</td>
</tr>
<tr>
<td>55-60</td>
<td>2</td>
</tr>
<tr>
<td>60-65</td>
<td>3</td>
</tr>
<tr>
<td>65-70</td>
<td>10</td>
</tr>
<tr>
<td>70-75</td>
<td>9</td>
</tr>
<tr>
<td>75-80</td>
<td>11</td>
</tr>
<tr>
<td>80-85</td>
<td>3</td>
</tr>
<tr>
<td>85-90</td>
<td>7</td>
</tr>
<tr>
<td>90-95</td>
<td>3</td>
</tr>
<tr>
<td>95-100</td>
<td>1</td>
</tr>
</tbody>
</table>

52
Table IV tabulates the frequency of chronological ages and mental ages at half year intervals. The chronological ages range from $8^8$ to $15^5$ years. The median chronological age is between twelve years and twelve years and five months. The mental ages begin at five years and five months and end at twelve years and three months. The median mental age is about nine years.
TABLE IV

FREQUENCY DISTRIBUTION OF CHRONOLOGICAL AND MENTAL AGES DIFFERENT LEVELS

<table>
<thead>
<tr>
<th>Years</th>
<th>Frequency Distribution of Chronological Ages</th>
<th>Frequency Distribution of Mental Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-5 to 6</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>to 6-5</td>
<td>6</td>
</tr>
<tr>
<td>6-5 to 7</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>to 7-5</td>
<td>4</td>
</tr>
<tr>
<td>7-5 to 8</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>to 8-5</td>
<td>4</td>
</tr>
<tr>
<td>8-5 to 9</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>to 9-5</td>
<td>4</td>
</tr>
<tr>
<td>9-5 to 10</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>to 10-5</td>
<td>3</td>
</tr>
<tr>
<td>10-5 to 11</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>to 11-5</td>
<td>0</td>
</tr>
<tr>
<td>11-5 to 12</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>to 12-5</td>
<td>13</td>
</tr>
<tr>
<td>12-5 to 13</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>to 13-5</td>
<td>3</td>
</tr>
<tr>
<td>13-5 to 14</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>to 14-5</td>
<td>0</td>
</tr>
<tr>
<td>14-5 to 15</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>to 15-5</td>
<td>0</td>
</tr>
<tr>
<td>15-5 to 16</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>52</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>
The reading grades ranged from zero to five plus. (The tests went through grade five only.) Of the fifty-two cases twenty-four were non-readers or were reading on the Primer level. Nineteen read second grade or better.

Every child participated in the Reading Capacity Test. Twenty-six scored highest on Word Meaning Test. Twenty-six scored highest on the Paragraph Meaning Test. The largest number, sixteen, scored on the third grade level.

Table V shows the distribution at different grade levels of reading achievement and reading capacity. The range of scores were from Grade 1.5 to Grade 5.5.

The first part of the Pre-requisites of Good Reading was a group test. They were tested on visual perception - recognition of letters and words when flashed. They were tested on auditory perception - writing word beginnings, word endings and encircling words dictated by the teacher.

The average score on the five parts of the test ranged from 0 to 100.

Those with ninety per cent or more as a score appeared to be those reading far below their capacity or those whose score equaled or exceeded their reading capacity.

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to or above reading capacity</td>
<td>5</td>
</tr>
<tr>
<td>Three years retarded</td>
<td>6</td>
</tr>
<tr>
<td>Average retardation</td>
<td>6</td>
</tr>
</tbody>
</table>
TABLE V

FREQUENCY DISTRIBUTION AT DIFFERENT GRADE LEVELS IN READING CAPACITY AND IN READING ACHIEVEMENT

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Reading Achievement</th>
<th>Reading Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Readers</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Primer</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>II</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>III</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>IV</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>V</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>
Those with a score of fifty per cent or less were:

- Up to or above reading capacity: 5
- Three years retarded: 0
- Average retardation: 2

In the Auditory Test forty-four had a higher score in words than in letters. The medians of the averaged scores on this test was:

- Beginnings: .80
- Endings: .50
- Words: .30+

Figure I showed that the children who were reading up to their capacity or those seriously retarded scored highest in the average of "Pre-requisites of good Reading."
The individual scores of the Auditory-Visual Perception Test and the amount of reading retardation is pictured with the average of all cases at each level of retardation shown by the line graph.
In the motor coordination test the scores ranged from zero to one hundred. Those who did the most reading wrote the best. There was a very sharp rise from the scores of the non-readers to those on the primer level as the one will see in Figure II.
FIGURE II.

Average scores on the Motor Coordination Tests at each level of reading achievement
The speech defects noted were sound substitution and short memory span.

That there are many more cases of speech defects among the non-readers and those who have made little progress is shown by Figure III. Of the fifty-two children twenty-six had speech defects.
FIGURE III.

Cases with speech defects
Cases with no speech defects

A comparison of the number of cases with speech defects and the number of cases with no speech defects at each level of reading achievement.
The result of the oral reading suggested that the mechanics of reading absorb most of the child's attention. Of the forty-three who read, twenty-five were checked for incorrect phrasing. Twenty-five had additions or omissions. Thirteen repeated one or more words.

Figure IV shows that seventy-nine per cent equaled or bettered their score on the oral reading recall than on the silent reading recall. Of the four who got fifty per cent better in oral reading, three were at least 3.5 years retarded. One of these acted extremely immature for his age and ability. Another, the teacher feels was working up to capacity even though the test shows differently. Another is credited with being a keen observer but having an unusually poor memory span.

Of the sixteen slow silent readers only one did better in silent reading than in oral reading.

Fourteen children were able to do no silent reading. Five of these did read orally.

Only three were reported as rapid readers. No significance was seen.
FIGURE IV.

Comparison of the number of cases who scored better in comprehension of oral reading with the number of cases who scored better in comprehension of silent reading.
In the test on ability to describe, phrases were most commonly used, then single words and, lastly, complete sentences. There were many grammatical errors and much slang used. The average reading capacity on each level of ability to describe was:

<table>
<thead>
<tr>
<th>Ability Level</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5</td>
<td>3.4</td>
<td>3.6</td>
<td>4.9</td>
</tr>
</tbody>
</table>

From this study is also appeared that the lower the I. Q. the more vocal expression was used in silent reading.

The most important points brought out by this study were:

1. Those children with I. Q.'s of eighty-five and above are reading far below their capacity. They need intensive instruction.

2. The children's ability to talk about a picture appeared to correlate with reading capacity. It would seem that fluency of speech was an important item in special classes.

3. Fifty per cent of the children had speech defects. The majority of these were on the lower levels of reading achievement. Speech education is an important part of special education.

4. Incorrect phrasing, omissions and additions were very common in oral reading. It was evident that the mechanics of reading and not the thought of the story was utmost in the readers mind. Insecurity and lack of proper teaching
might add to the cause.

5. Those who had perfect or near perfect scores in recall were, on the whole, working far below their capacity. Those with low scores were, on the whole, working up to or nearly up to their capacity.

6. The silent reading recall was poorer than the oral reading recall. The speed of silent reading seemed to make no appreciable difference on the amount recalled.

7. The lower the I. Q. the more vocalization in silent reading.

Because difficulties increased as the I. Q. went lower the children fell into three groups for further study.

<table>
<thead>
<tr>
<th>I. Q.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>85-96</td>
</tr>
<tr>
<td>Group II</td>
<td>70-85</td>
</tr>
<tr>
<td>Group III</td>
<td>50-70</td>
</tr>
</tbody>
</table>

Group one were children of nearly normal ability. With the exception of one they are reading far below their ability. The exception was twelve years and four months old and returned to a regular grade for some of his work.

Group two were the middle group in special class. This group was very inconsistent in their progress. Figure VII shows that once they got started to read most of them read somewhere near their capacity. Of the four reading far below their capacity three are emotional cases.

Group three were the lowest mental group. Many of these were institution cases. Their attendance was irregular
Some read above their capacity as found by the test. There were only two non-readers in the group. There were four in the middle group and one in the first. Very few of these children were discipline or emotional problems.

These children were grouped in order to suggest techniques for improving their reading.
CHAPTER V

RECOMMENDATIONS FOR IMPROVING THE READING
CHAPTER V.

RECOMMENDATIONS FOR IMPROVING THE READING

Many of these children had made many unsuccessful attempts to read. Because of the repeated failures they were no longer enthusiastic about reading. It would be necessary to build up their interest and restore their self confidence. They need to start where they are reasonably successful and by some means, as those suggested later in this chapter, are able to see their progress.

This school system is very thorough in physical check-ups so it is taken for granted that all physical needs are cared for.

All children need to work at a level where they are successful. Stumbling over too difficult material is discouraging and uninteresting. Hegge recommends a program of prolonged pre-academic training, with emphasis upon reading instruction being introduced at a chronological age of eleven or twelve. This would allow for maturation to reach a level which will permit rapid progress in reading. The author agrees that this is usually the best method, except with those who really desire to start before this.

Children are interested in working if they see that they are making progress. Some ways to show children that they are progressing are:

1. Tachistoscope 2/ used with standard lists of graded words. 3/

2. Flash cards made from vocabulary in back of text used. Check progress once a week on individual charts.

3. Having several sets of Basic Readers. Some on the same level are or appear more difficult than others. The teacher might label these in what she considers the order of difficulty.

4. Having the child read something he read two months before.

5. Helping someone who is slower than he is.

Every child needs every opportunity to widen his experiences, enlarge his vocabulary, and to become more fluent in talking. Curtis 4/ has excellent suggestions for this.

An arbitrary division of three groups was made for the convenience of further suggestions to improve the reading.

---


3/ Ibid., pp. 350-355

Each teacher would need to supplement these findings with more information about the child's physical condition, emotional control and attitude toward school and learning. There would be divisions within the group. In some cases the child would not fit in the grouping at all, but would be placed in another group.
Table VI shows the groups as divided.

**TABLE VI**
DIVISIONS FOR GROUPING WITH RANGE AND MEDIUM GIVEN FOR I. Q., M. A., READING CAPACITY AND READING ACHIEVEMENT

<table>
<thead>
<tr>
<th>GROUP</th>
<th>INTELLIGENCE QUOTIENT</th>
<th>MENTAL AGES</th>
<th>READING CAPACITY</th>
<th>READING GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range Medium</td>
<td>Range Medium</td>
<td>Range Medium</td>
<td>Range Medium</td>
</tr>
<tr>
<td>I</td>
<td>85-96</td>
<td>89</td>
<td>82-116</td>
<td>910</td>
</tr>
<tr>
<td>II</td>
<td>70-81</td>
<td>75</td>
<td>63-104</td>
<td>811</td>
</tr>
<tr>
<td>III</td>
<td>50-70</td>
<td>63</td>
<td>55-93</td>
<td>75</td>
</tr>
</tbody>
</table>

Group I included those with I. Q.'s from 85-96 and a medium of 89. The medium mental age was 910 years, the medium score in Reading Capacity was 3.6 and the medium in Reading Achievement was Grade I.

The second group had I. Q.'s from 70-81. The medium age for this group was eleven months younger, yet the medium in the Reading Capacity Test was the same and so was the medium grade score.

In the third group the I. Q.'s ranged from 50 to 70. The medium was 63. The mental ages were one year and six months lower than the second group. The medium for the Reading Capacity was six months lower. The medium grade in Reading Achievement still remained the same.
GROUP I

This group appeared to be the remedial reading group.

Table VII gives the intelligence quotient, mental age, reading capacity and reading ability of each case in this group. This table shows that each subject is reading far below his ability. The eleven procedures for basic skills outlined by Durrell5/ make an effective program. For this purpose the most important are:

1. The teacher is familiar with the individual differences of her pupils.
2. The teacher has specific objectives for each child-- in her class.
3. There is a definite plan for observation of pupils' growth in voluntary reading habits.
4. There is adequate provision for differences in the reading abilities of her children.
5. The teacher has definite plans for motivation of reading.
6. There is full attention to growth in vocabulary.
7. Oral - reading instruction is made effective by maintaining interest.

This group should be able to make rapid progress. Use of interesting gadgets arouse enthusiasm. The Word-Wheel lists 6/ is one method of teaching word analysis and gives a definite basis for checking progress. Other word analysis

5/ Donald D. Durrell, Improvement of Basic Reading Abilities (Yonkers-on-Hudson, World Book Company, 1940), pp. 4-11

6/ Ibid., pp. 224-226
TABLE VII

SUBJECTS WHOSE I. Q.'S WERE BETWEEN 85 AND 100 ARRANGED ACCORDING TO MENTAL AGES

<table>
<thead>
<tr>
<th>Intelligence Q.</th>
<th>Mental Age</th>
<th>Reading Capacity</th>
<th>Reading Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>96</td>
<td>8-2</td>
<td>2.3</td>
<td>P</td>
</tr>
<tr>
<td>88</td>
<td>8-3</td>
<td>3.6</td>
<td>P</td>
</tr>
<tr>
<td>88</td>
<td>8-4</td>
<td>2.4</td>
<td>0</td>
</tr>
<tr>
<td>92</td>
<td>9-5</td>
<td>3.2</td>
<td>P</td>
</tr>
<tr>
<td>88</td>
<td>9-10</td>
<td>3.2</td>
<td>1</td>
</tr>
<tr>
<td>90</td>
<td>10-1</td>
<td>4.9</td>
<td>1</td>
</tr>
<tr>
<td>86</td>
<td>10-7</td>
<td>5.3</td>
<td>4</td>
</tr>
<tr>
<td>89</td>
<td>10-8</td>
<td>4.0</td>
<td>1</td>
</tr>
<tr>
<td>87</td>
<td>11-6</td>
<td>4.9</td>
<td>1</td>
</tr>
</tbody>
</table>

Table VII contains the nine, with the exception of one with an I. Q. of 94 who could not be adequately tested by the tests devised, who had I. Q.'s between 85 and 100. These children read from two to nearly four years below their capacity.
exercises 7/ are fun to do, help the reading improve and give the child a feeling of progress.

Table VIII

SUBJECTS WHOSE I. Q.'S WERE BETWEEN 70 AND 85 ARRANGED ACCORDING TO MENTAL AGES

<table>
<thead>
<tr>
<th>Intelligence Q.</th>
<th>Mental Age</th>
<th>Reading Capacity</th>
<th>Reading Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>6-3</td>
<td>2.1</td>
<td>P</td>
</tr>
<tr>
<td>77</td>
<td>6-8</td>
<td>2.1</td>
<td>0</td>
</tr>
<tr>
<td>72</td>
<td>6-9</td>
<td>2.0</td>
<td>P</td>
</tr>
<tr>
<td>71</td>
<td>7-3</td>
<td>3.6</td>
<td>P</td>
</tr>
<tr>
<td>70</td>
<td>7-7</td>
<td>2.3</td>
<td>P</td>
</tr>
<tr>
<td>70</td>
<td>8-7</td>
<td>2.7</td>
<td>P</td>
</tr>
<tr>
<td>78</td>
<td>8-7</td>
<td>2.9</td>
<td>3</td>
</tr>
<tr>
<td>70</td>
<td>8-9</td>
<td>2.8</td>
<td>2</td>
</tr>
<tr>
<td>76</td>
<td>8-10</td>
<td>4.3</td>
<td>P</td>
</tr>
<tr>
<td>79</td>
<td>8-11</td>
<td>4.5</td>
<td>1</td>
</tr>
<tr>
<td>74</td>
<td>9-1</td>
<td>4.1</td>
<td>4</td>
</tr>
<tr>
<td>74</td>
<td>9-3</td>
<td>4.5</td>
<td>P</td>
</tr>
<tr>
<td>78</td>
<td>9-3</td>
<td>3.7</td>
<td>3</td>
</tr>
<tr>
<td>78</td>
<td>9-5</td>
<td>3.6</td>
<td>P</td>
</tr>
<tr>
<td>79</td>
<td>9-6</td>
<td>3.7</td>
<td>3</td>
</tr>
<tr>
<td>71</td>
<td>9-7</td>
<td>4.0</td>
<td>2</td>
</tr>
<tr>
<td>80</td>
<td>9-7</td>
<td>2.8</td>
<td>2</td>
</tr>
<tr>
<td>74</td>
<td>9-9</td>
<td>3.3</td>
<td>4</td>
</tr>
<tr>
<td>77</td>
<td>10-4</td>
<td>5.1</td>
<td>3</td>
</tr>
</tbody>
</table>

Table VIII contains the nineteen children in the middle group. The mental ages range from 6-3 years to 10-4 years. There are more children here reading up to their capacity or nearly up to it. The amount of reading retardation fluctuates widely. Not until the mental age of 9-6 do they consistently read above the primer level.

7/ Ibid., pp. 197-230
McLeod 8/ has some excellent instructional material for the beginning-to-read child.

Wilkinson and Brown 9/ is an excellent teacher-pupil text for those reading third grade or above.

There are many books on the market that are of high interest level but with an easy vocabulary. Durrell 10/, and Wilkinson and Brown 11/ have compiled a bibliography of this type of book.

GROUP II.

This group contained the largest number of the three groups that made up the special classes.

Figure VIII lists the I. Q., the mental age, Reading Capacity and Reading Achievement of each case in this group.

This group would be taught somewhat as Group I but would not have the prospects of such rapid advancement.

This group seemed to need special care in fluency of speech and correction or oral language habits. Besides the suggestions which follow for Group III, Choral Speaking might

8/ L. W. McLeod, "Instructional Material for Slow Learners of Grade One," (Unpublished Service Paper, Boston University, Boston, 1944) 51 p.


10/ Durrell, op. cit., p. 112-115

11/ Wilkinson, op. cit., p. 345-349
be used with this group to improve tones, speech habits, and pitch. 12/

The handwriting of this group needed special attention. Many of these children were left-handed. It would be important that they be taught the correct position when writing is first introduced.

GROUP III.

Group III is the poorest group in the Special Classes. Table IX shows that some of these are reading on the third and fourth grade level. Few will read beyond the third grade with any amount of comprehension. It is important that the teacher let her methods and quantity of work be guided by the children, their interests, needs, and abilities.

These children need careful training in word analysis, but no work in phonetics should be given until the child has established correct eye habits and knows the meaning of phonetics. Otherwise he gets accustomed to seeing words in parts. 13/


<table>
<thead>
<tr>
<th>Intelligence Q.</th>
<th>Mental Age</th>
<th>Reading Capacity</th>
<th>Reading Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>5-5</td>
<td>2.4</td>
<td>P</td>
</tr>
<tr>
<td>65</td>
<td>6-0</td>
<td>2.5</td>
<td>0</td>
</tr>
<tr>
<td>67</td>
<td>6-2</td>
<td>2.0</td>
<td>P</td>
</tr>
<tr>
<td>51</td>
<td>6-3</td>
<td>2.3</td>
<td>3</td>
</tr>
<tr>
<td>65</td>
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<td>0</td>
</tr>
<tr>
<td>67</td>
<td>6-4</td>
<td>2.9</td>
<td>0</td>
</tr>
<tr>
<td>60</td>
<td>6-7</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>60</td>
<td>7-2</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>68</td>
<td>7-2</td>
<td>2.1</td>
<td>1</td>
</tr>
<tr>
<td>61</td>
<td>7-4</td>
<td>3.0</td>
<td>2</td>
</tr>
<tr>
<td>65</td>
<td>7-6</td>
<td>3.3</td>
<td>P</td>
</tr>
<tr>
<td>60</td>
<td>7-7</td>
<td>3.3</td>
<td>2</td>
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<tr>
<td>53</td>
<td>7-8</td>
<td>2.1</td>
<td>4</td>
</tr>
<tr>
<td>69</td>
<td>8-2</td>
<td>4.4</td>
<td>1</td>
</tr>
<tr>
<td>56</td>
<td>8-4</td>
<td>3.2</td>
<td>3</td>
</tr>
<tr>
<td>63</td>
<td>8-9</td>
<td>4.1</td>
<td>P</td>
</tr>
<tr>
<td>68</td>
<td>8-10</td>
<td>3.5</td>
<td>1</td>
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<tr>
<td>65</td>
<td>8-11</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td>68</td>
<td>9-3</td>
<td>5.5</td>
<td>1</td>
</tr>
</tbody>
</table>

Table IX contains nineteen children in the lowest of the three groups divided according to mentality. The mental ages range is from 5-5 years to 9-3 years. The amount of retardation in reading varies greatly. Not until the mental age of 8-10 years do they consistently read above Primer level.
Extra attention is needed with this group in speech, oral language and enrichment of vocabulary. Speech defects are common and it is most important that they be corrected as far as possible. "The Rehabilitation of Speech" by West, Kennedy and Carr 14/ is an excellent text for teachers. Schoolfield's "Better Speech and Better Reading" 15/ is a good text for teacher and child.

There is a need for experiences that call for expression of ideas. Opportunities will arise in:

1. A broad social studies program emphasising his own community and other communities in relation to it.

2. Programs

   a. Ready-made plays

   b. Pupil-made programs such as making lantern slides to illustrate some phase of their work. Each child should explain his own to the audience.


15/ Lucille D. Schoolfield, Better Speech and Better Reading, (Boston: Houghton Mifflin Company, 1937)
3. Use of picture science books.  
4. Carrying verbal messages to other teachers.  
5. Special care in general conversation in the classroom.

The vocabulary of this group needed intensive work. The ability to express themselves is very important for their intelligence is often judged by society by their ability to talk. Every opportunity should be used to enrich and widen the vocabulary.

The reading must be exceedingly practical. Stories on charts of activities in the room and school (fully discussed by Lamoreaux 17/), bus signs, public signs such as "ROOM TO RENT" and "HOUSE FOR SALE" should be part of their reading. Danger signals such as those on railroad tracks are important. They need to know directional signs when they ride a bicycle.

The Boston Way 18/ and Kirk 19/ suggest many ways of presenting reading to this type of child.

16/ Curriculum Foundation Series, Look and Learn All Around Us How Do We Know? (New York: Scott Foresman and Company, 1944)

17/ Lillian A. Lamoreaux, and Dorris May Lee, Learning to Read Through Experience (New York: D. Appleton-Century Company, 1943)

18/ Boston Special Class Teachers, The Boston Way (Boston: R. Claire Carven, George T. Angell School, 1928)

19/ Samuel A. Kirk, Teaching Reading to Slow Learning Children (Boston: Houghton Mifflin Company, 1940)
Whether to teach script or cursive writing is debatable. The writer believes as cursive writing is generally used it should be taught as soon as the child is mature enough to learn.

When a child fails to learn to read a fresh start should be made with much board work and later a different reader. But first of all he should be filled with an enthusiastic desire to read. 20/

With an older child who does not read and does not seem to care it is wise to find what he is interested in. If he has no interest, give him one. This interest can be a basis for selection of stories or for teacher-child written stories.

For this group and for all groups let the child work at a level at which he is successful, let him see that he is progressing and help him to feel he is a welcomed member of the group and one who has contributions to make.

CHAPTER VI

SUGGESTIONS FOR FURTHER STUDY
CHAPTER VI

SUGGESTIONS FOR FURTHER STUDY

1. Analysis of test items on the Stanford-Binet tests of children in special classes. It might be interesting to analyze the type of test items on which each made his total score. It would be interesting to study the spread of test items and see if it had any significance with the child's ability to read.

2. Some of these children are in school several years before they are ready to read. A source book of finely graded reading readiness materials would be useful. Also, published workbooks for beginners on a high interest level and with very slow building up of vocabulary.

3. The poorer readers or none-readers included a very large percentage of speech defects. Would these children's ability to read increase rapidly with concentrated effort on speech correction?

4. Seventy-nine per cent of the children did as well or better in oral reading recall than in silent reading recall. This could be lack of being properly taught or do these children, and possibly all children, remember subjects read orally better than those read silently? This may be one method of telling which way the child learns more easily.

5. The lower the intelligence the more these children
vocalized in silent reading.

A study might determine whether this is habit that should be corrected or whether allowing this improves understanding.

6. The reading achievement of the children below 85 I. Q. was very inconsistent when compared to their reading capacity. A study of their school histories and physical histories might determine why some read up to or above their capacity and why some read far below.

7. The upper group of intelligence, those with an I. Q. from 85 to 100, read consistently far below their capacity. An analyses of these individuals' reading difficulties compared to a similar group of the same C. A. and M. A. in a regular class would be interesting.
BIBLIOGRAPHY

A. BOOKS


Curriculum Foundation Series, Look and Learn All Around Us how Do We Know? New York: Scott Foresman and Company, 1944


B. PERIODICALS


C. UNPUBLISHED MATERIALS


McLeod, L. W., "Instructional Material for Slow Learners of Grade One," Unpublished Service Paper, Boston University, Boston, 1944. 51 pp.


Rhodes, Mrs. Charlotte D., "Diagnostic Study of Third Grade Reading Difficulties with Suggestions for Remedial Instruction," Unpublished M. S. thesis, Texas College of Arts and Industries, Kingsville, Texas, 1940.

D. STANDARD TESTS


Visual Perception

I.

Letters which are encircled are flashed. Children are to put circles around the words on their own paper.

1. c d f a
2. d b c g
3. q e p d
4. e w v c
5. t l i m
6. l m t n

II.

Flash the card which is encircled. Children are to put circles around words on their own papers.

1. bay toy boy bog
2. plum ply clay play
3. come came some comb
4. hat had pad hod
5. donkey don't don doorkey
doorkey
6. stall stodgy stolid stone
7. chart chair chattel chat
8. doorman doorbell doorkey doorstep
9. horse hen house louse
10. though thought through thorough

Auditory Perception

Tell what letter these begin with:

1. dog 4. goat
2. fun 5. soap
3. pill 6. wind

Tell what letter these end with:

7. hello 10. pass
8. bun 11. fat
9. gum 12. back

Tell what two letters these begin with:

13. this 15. tree
14. what 16. street

Tell what two letters these end with:

17. bush 19. button
18. batch 20. pretty
Put a circle around the word I say:

1. ball  can  run  play
2. come  do  said  my
3. was  will  wind  did
4. house  horse  mud  go
5. good  food  blocks  did
6. mine  my  myself  mind
7. mill  fill  pill  till
8. shall  should  ship  sharp
9. spring  sprout  sprang  sprung
10. was  saw  sat  wad

Motor Coordination

Allow one minute and a half for copying. Each letter made correctly counts one.

He can not run or play.
The jelly is very sweet on bread.

Articulation

A. Select one of the five pictures. Four are given so that the child will not repeat what he has heard the preceding children say. Say-Tell me about this picture. Encourage by asking - What is happening? What else do you see? Repeat these once or twice if necessary but no more. Write down the story.

B. Children are to repeat these words after the teacher. Write mispronunciation on child's sheet.

pretty  this thing
come home  these little kittens
playing and working  come and play with me

she did you did will they (Say as a sentence.)
she sells sea shells
transportation
FLASH CARDS

for

VISUAL PERCEPTION

TEST I

FLASH CARDS

for

VISUAL PERCEPTION

TEST II
Select a picture about which the child is to tell a story.
Rotate pictures to avoid repetition of stories.
Name:

1. c  d  f  a
2. b  c  d  g
3. q  e  p  d
4. e  w  v  e
5. t  l  i  m
6. l  m  t  n

Score

II.

1. bay    toy    boy    bog
2. plum   ply    clay   play
3. come   came   some   comb
4. hat    had    pad    hod
5. donkey don    don't  doorkey
6. stall  stodgy stolid stone
7. chart  chair  chattel cnat
8. doorman doorbell doorkey doorstep
9. horse  hen    house  louse
10. though thought through thorough

Score

III.

1. 6. 11. 16.
2. 7. 12. 17.
3. 8. 13. 18.
5. 10. 15. 20.

Score
Put a circle around the word which I say:

1. ball  can  run  play
2. come  do  said  my
3. was  will  wind  did
4. house  horse  mud  go
5. good  food  blocks  did
6. mine  my  myself  mind
7. mill  fill  pill  till
8. shall  should  ship  sharp
9. spring  sprout  sprang  sprung
10. was  saw  sat  wad

He can not run or play.

The jelly is very sweet on bread.

(The teacher writes the rest of this test.)

VI

pretty
come home
playing and working
this thing
these little kittens
come and play with me
she did you did will they
she sells sea shells
transportation
These cards are graded in the following way:

Red-------------------Primer
Orange------------------Grade One
Yellow------------------Grade Two
Green------------------Grade Three
Blue-------------------Grade Four
Violet-------------------Grade Five

The "A" side is for oral reading;
The "B" side is for silent reading.

First select the card which approximates the child's level. As the child reads aloud the teacher is to check on the corresponding sheet:

words unknown like house
words misspronounced
words skipped for
words inserted by reader
phrasing /There seemed to be hundreds of things /
words repeated come

If the child makes seven or more errors go back one level. Disregard the corresponding sheet started.

Second when the child has read the story ask him to tell all he can remember. Check ( ) these items on his corresponding sheet under "Unaided Recall". For memories he has omitted, ask the questions as listed and check correct answers, or reasonable interpretation of the story, under "Aided Recall"

Third, give the child the silent reading card for the corresponding level. As he reads observe lip movements, attention to the task and speed of reading. Check the recall the same as in the oral reading. Also, check the three silent reading habits listed.

If the level is too hard - he cannot answer five questions with aid or he does not persist in his task - try him on the next lower level.
One Christmas Tom and Ann were told that they might buy their Christmas presents by themselves. There seemed to be hundreds of things to buy. They thought they would buy toys for everyone. An elephant for father, a drum that made a big noise for grandfather. For mother they bought a top that played music. Their big brother found a beautiful knife in his stocking.
Of all the animals in the circus it is the most fun to see the elephant eat. He likes peanuts. The lion and the tiger like meat. The monkey will eat a banana. People who come to see the animals must not feed them. A girl once thought she would feed the lion something. She was too close to him. The lion grew cross. He might have killed her if he had not been in a cage.
The family went on a trip to the mountains. The mother and two daughters remained at a hotel. As Jack and his father had planned they climbed to the top of the mountain. At night they built a campfire. They set up a tent. But Jack couldn't sleep. The wild animals kept him awake all night. They frightened Jack. The next day they broke camp and tramped back down the mountain. Though Jack was tired he made his father promise to take him again.
Grandmother and grandfather just happened to be on the porch. They were surprised to see their family come to visit them. Dinner was nearly ready but there was not enough for five persons. While the family washed up, grandmother hurried to bake more chops. Grandfather went to the store for ice cream. Everyone hurried for they wanted to eat. Inside of ten minutes they were all at the table eating and visiting.
Accidents on the highway cause enormous loss of life and property. Safety programs discouraged much careless driving. To some drivers this has been valueless for they would not consider the other fellow. Lack of gasoline decreased accidents for a while. Now that is plentiful and new models are on the market. We must again impress drivers of the necessity of careful driving.
A weary truck driver sped along the road. Few cars were out. He dozed. The approach of a speeding car didn't jostle him to alertness. He swerved to the left. The truck bumper just grazed the car bumper. Then in an instant he did become wide awake. It was miraculous that the cars did miss by so small a margin.
Pat was making a house.
She liked to play house.
The dog came to see what the little girl was doing.
He liked Pat.
He liked to see her play.
He liked to go into the house.
He was too big for that.
"Go away," said Pat. "The house will fall."

Questions

<table>
<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who was the little girl?</td>
<td></td>
</tr>
<tr>
<td>2. What was she doing?</td>
<td></td>
</tr>
<tr>
<td>3. What did she like?</td>
<td></td>
</tr>
<tr>
<td>4. Who came?</td>
<td></td>
</tr>
<tr>
<td>5. What did he come to see?</td>
<td></td>
</tr>
<tr>
<td>6. What did he like?</td>
<td></td>
</tr>
<tr>
<td>7. What else did he like?</td>
<td></td>
</tr>
<tr>
<td>8. Why shouldn't he go in the house?</td>
<td></td>
</tr>
<tr>
<td>9. What did Pat say?</td>
<td></td>
</tr>
<tr>
<td>10. What else did she say?</td>
<td></td>
</tr>
</tbody>
</table>
Pat was making a house.
She liked to play house.
The dog came to see
what the little girl was doing.
He liked Pat.
He liked to see her play.
He liked to go in the house.
He was too big for that.
"Go away," said Pat. "The house will fall."
Pat was making a house.
She liked to play house.
The dog came to see
what the little girl was doing.
He liked Pat.
He liked to see her play.
He liked to go in the house.
He was too big for that.
"Go away," said Pat. "The house will fall."
Baby bears, like children, must do what their mothers say. If they do not do it the mother bear may get cross. The two little bears were each given some milk. One little bear drank his fast. Then he tried to take his brother’s milk. Mother bear did not like this. She made the bad little bear stop.
Once the mother bear lived in the woods. She had to look for her own food. One summer morning when she was looking for food some men found her. They took her to the park. Now there are two little bears. They were very small at first but they grew fast. Like boys and girls they have milk to drink.
Name:

SILENT READING

Encircle one for each reading habit.

<table>
<thead>
<tr>
<th>Lip Movements</th>
<th>None</th>
<th>Some</th>
<th>Continuous</th>
<th>Whispers to himself</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>Continuous</td>
<td>Fair</td>
<td>Poor</td>
<td>No silent reading</td>
</tr>
<tr>
<td>Speed of Reading</td>
<td>Fast</td>
<td>Medium</td>
<td>Slow</td>
<td></td>
</tr>
</tbody>
</table>

Questions

<table>
<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What happened to the house?</td>
<td></td>
</tr>
<tr>
<td>2. What did the dog want to do?</td>
<td></td>
</tr>
<tr>
<td>3. What did Pat say to the dog?</td>
<td></td>
</tr>
<tr>
<td>4. What was mother to tell the dog he could not do?</td>
<td></td>
</tr>
<tr>
<td>5. What did she want mother to tell the dog to do?</td>
<td></td>
</tr>
<tr>
<td>6. Where did mother tell the dog to go?</td>
<td></td>
</tr>
<tr>
<td>7. What did mother say Pat was doing?</td>
<td></td>
</tr>
<tr>
<td>8. What did Pat do then?</td>
<td></td>
</tr>
<tr>
<td>9. When did Pat have the house made again?</td>
<td></td>
</tr>
</tbody>
</table>
Once the mother bear lived in the woods. She had to look for her own food. One summer morning when she was looking for food some men found her. They took her to the park. Now there are two little bears. They were very small at first but they grew fast. Like boys and girls they have milk to drink.

Questions

<table>
<thead>
<tr>
<th>Unaided Recall</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Who is the story about?</td>
<td></td>
</tr>
<tr>
<td>2. Where did she live?</td>
<td></td>
</tr>
<tr>
<td>3. What did she have to do?</td>
<td></td>
</tr>
<tr>
<td>4. When did it happen?</td>
<td></td>
</tr>
<tr>
<td>5. What was the mother bear doing?</td>
<td></td>
</tr>
<tr>
<td>6. Who found her?</td>
<td></td>
</tr>
<tr>
<td>7. Where did they take her?</td>
<td></td>
</tr>
<tr>
<td>8. How many more bears are there?</td>
<td></td>
</tr>
<tr>
<td>9. How did they look at first?</td>
<td></td>
</tr>
<tr>
<td>10. What do they have that is the same as boys and girls?</td>
<td></td>
</tr>
</tbody>
</table>
SILENT READING

Encircle one for each reading habit.

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<table>
<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who must little bears mind?</td>
<td></td>
</tr>
<tr>
<td>2. What may happen if they don't?</td>
<td></td>
</tr>
<tr>
<td>3. How many little bears were there?</td>
<td></td>
</tr>
<tr>
<td>4. What were they given?</td>
<td></td>
</tr>
<tr>
<td>5. How did one little bear drink his?</td>
<td></td>
</tr>
<tr>
<td>6. What did he try to do?</td>
<td></td>
</tr>
<tr>
<td>7. Did mother bear like this?</td>
<td></td>
</tr>
<tr>
<td>8. What did mother bear do?</td>
<td></td>
</tr>
</tbody>
</table>
One Christmas Tom and Ann were told that they might buy their Christmas presents by themselves. There seemed to be hundreds of things to buy. They thought they would buy toys for everyone. An elephant for father, a drum that made a big noise for grandfather. For mother they bought a top that played music. Their big brother found a beautiful knife in his stocking.

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<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When did this happen?</td>
<td></td>
</tr>
<tr>
<td>2. What were the boy's and girl's names?</td>
<td></td>
</tr>
<tr>
<td>3. What were they going to do?</td>
<td></td>
</tr>
<tr>
<td>4. How many things did there seem to be to buy?</td>
<td></td>
</tr>
<tr>
<td>5. What did they decide to buy for everyone?</td>
<td></td>
</tr>
<tr>
<td>6. What did they buy for father?</td>
<td></td>
</tr>
<tr>
<td>7. What did they buy for grandfather?</td>
<td></td>
</tr>
<tr>
<td>8. What did they buy for mother?</td>
<td></td>
</tr>
<tr>
<td>9. What did they buy for their brother?</td>
<td></td>
</tr>
<tr>
<td>10. Where did they put his present?</td>
<td></td>
</tr>
</tbody>
</table>
Name:

SILENT READING

Encircle one for each reading habit.

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<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Where do these animals live?</td>
<td></td>
</tr>
<tr>
<td>2. Which is the most fun to watch eat?</td>
<td></td>
</tr>
<tr>
<td>3. What does the elephant like?</td>
<td></td>
</tr>
<tr>
<td>4. What do the lion and tiger like?</td>
<td></td>
</tr>
<tr>
<td>5. What will the monkey eat?</td>
<td></td>
</tr>
<tr>
<td>6. The people who come to see the animals must not do what?</td>
<td></td>
</tr>
<tr>
<td>7. What did a girl once think she would do?</td>
<td></td>
</tr>
<tr>
<td>8. Where was she standing?</td>
<td></td>
</tr>
<tr>
<td>9. What did the lion do?</td>
<td></td>
</tr>
<tr>
<td>10. What saved her life?</td>
<td></td>
</tr>
</tbody>
</table>
The family went on a trip to the mountains. The mother and two daughters remained at a hotel. As Jack and his father had planned, they climbed to the top of the mountain. At night they built a campfire. They set up a tent. But Jack couldn't sleep. The wild animals kept him awake all night. They frightened Jack. The next day they broke camp and tramped back down the mountain. Though Jack was tired, he made his father promise to take him again.

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<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Where did the family go?</td>
<td></td>
</tr>
<tr>
<td>2. Where did the mother and girls stay?</td>
<td></td>
</tr>
<tr>
<td>3. What did Jack and his father plan to do?</td>
<td></td>
</tr>
<tr>
<td>4. What two things did they do at night?</td>
<td></td>
</tr>
<tr>
<td>5. Why couldn't Jack sleep?</td>
<td></td>
</tr>
<tr>
<td>6. How did Jack feel about the animals?</td>
<td></td>
</tr>
<tr>
<td>7. What did they do the next day?</td>
<td></td>
</tr>
<tr>
<td>8. How did they get down the mountain?</td>
<td></td>
</tr>
<tr>
<td>9. How did Jack feel?</td>
<td></td>
</tr>
<tr>
<td>10. What did he make his father promise?</td>
<td></td>
</tr>
</tbody>
</table>
SILENT READING

Encircle one for each reading habit.

<table>
<thead>
<tr>
<th>Lip Movements</th>
<th>None</th>
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<th>Continuous</th>
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<tbody>
<tr>
<td>Attention</td>
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<td>Fair</td>
<td>Poor</td>
<td>No silent reading</td>
</tr>
<tr>
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<td>Fast</td>
<td>Medium</td>
<td>Slow</td>
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</tr>
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</table>

Questions

<table>
<thead>
<tr>
<th></th>
<th>Unaided</th>
<th>Aided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td></td>
<td>Recall</td>
</tr>
<tr>
<td>1.</td>
<td>Who happened to be on the porch?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>What were they surprised at?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>What was nearly ready?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>What did the family do?</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>What did Grandmother do?</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>What did Grandfather do?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Why did everyone hurry?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>How long did it take them to get ready?</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>What did they do at the table?</td>
<td></td>
</tr>
</tbody>
</table>
Name:

Grade IV.

ORAL READING

On the limb of a maple tree was the nest of two robins. The foliage concealed their home. One day, from a nearby tree, I caught a glimpse of the pair in serious thought. I tried not to startle them for I wanted to observe them. The female robin seemed in distress because only two eggs were there. They seemed uncertain as to what they should do about being robbed.

Questions

<table>
<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Where was the nest?</td>
<td></td>
</tr>
<tr>
<td>2. Whom did it belong to?</td>
<td></td>
</tr>
<tr>
<td>3. Why shouldn't anyone see the nest?</td>
<td></td>
</tr>
<tr>
<td>4. How did I see the nest?</td>
<td></td>
</tr>
<tr>
<td>5. Why was I careful not to startle them?</td>
<td></td>
</tr>
<tr>
<td>6. Who seemed most distressed?</td>
<td></td>
</tr>
<tr>
<td>7. What had happened?</td>
<td></td>
</tr>
<tr>
<td>8. How did they feel about it?</td>
<td></td>
</tr>
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Questions

<table>
<thead>
<tr>
<th>Unaided Recall</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. What do baby robins have?</td>
<td></td>
</tr>
<tr>
<td>2. How much food do they eat?</td>
<td></td>
</tr>
<tr>
<td>3. What happens when a parent nears the nest?</td>
<td></td>
</tr>
<tr>
<td>4. What happens to the lucky bird?</td>
<td></td>
</tr>
<tr>
<td>5. What does the parent do then?</td>
<td></td>
</tr>
<tr>
<td>6. What word tells how they went?</td>
<td></td>
</tr>
<tr>
<td>7. What goes on for a while?</td>
<td></td>
</tr>
<tr>
<td>8. How long does it go on?</td>
<td></td>
</tr>
</tbody>
</table>
Accidents on the highway cause enormous loss of life and property. Safety programs discouraged much careless driving. To some drivers this has been valueless for they would not consider the other fellow. Lack of gasoline decreased accidents for a while. Now that is plentiful and new models are on the market. We must again impress drivers of the necessity of careful driving.

**Questions**

<table>
<thead>
<tr>
<th>Unaided Recall</th>
<th>Aided Recall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is this story about?</td>
<td>2. What do accidents cause?</td>
</tr>
<tr>
<td>3. What has discouraged much careless driving?</td>
<td>4. Why has this been valueless to some?</td>
</tr>
<tr>
<td>5. What decreased accidents for a while?</td>
<td>6. How is the gasoline supply now?</td>
</tr>
<tr>
<td>7. What is on the market now?</td>
<td>8. Who must we again impress?</td>
</tr>
<tr>
<td>9. What must we impress drivers about?</td>
<td></td>
</tr>
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SILENT READING

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Questions

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</tr>
</thead>
<tbody>
<tr>
<td>1. Who sped along the road?</td>
<td></td>
</tr>
<tr>
<td>2. How was the traffic?</td>
<td></td>
</tr>
<tr>
<td>3. What did the driver do?</td>
<td></td>
</tr>
<tr>
<td>4. What should have made him alert?</td>
<td></td>
</tr>
<tr>
<td>5. What did he do when the car got very near?</td>
<td></td>
</tr>
<tr>
<td>6. What did the car and truck do as they met?</td>
<td></td>
</tr>
<tr>
<td>7. In an instant the driver became what?</td>
<td></td>
</tr>
<tr>
<td>8. What was miraculous?</td>
<td></td>
</tr>
<tr>
<td>9. What is one lesson this teaches us?</td>
<td></td>
</tr>
</tbody>
</table>
RECORD BOOKLET — Form L
FOR THE REVISED STANFORD-BINET SCALE
as described in Terman and Merrill's Measuring Intelligence

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Name.................................................. Examiners............................ C.A.
Sex........................................ Birthdate...................................... Date................ M.A.
School........................................ Grade........................................ I.Q.
Parent........................................ Address...................................
Birthplace........................................ of father................................. of mother............................
Occupation of father.......................... of mother............................
Race........................................ Nationality of descent..................

<table>
<thead>
<tr>
<th>Willingness</th>
<th>enthusiastic eagerness</th>
<th>enters actively into task</th>
<th>normal attitude because proper</th>
<th>disagreeable task</th>
<th>active objection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-confidence</td>
<td>extremely self-confident; relies on own ability</td>
<td>rather self-confident</td>
<td>neither distrustful nor entirely self-reliant</td>
<td>inclined to distrust own ability</td>
<td>extremely lacking in self-confidence; constantly distrustful of own ability</td>
</tr>
<tr>
<td>Social confidence</td>
<td>perfectly assured in personal contacts</td>
<td>rather confident</td>
<td>normal for age</td>
<td>rather shy</td>
<td>shy, reserved, reticent</td>
</tr>
<tr>
<td>Attention</td>
<td>completely absorbed by task</td>
<td>little interference from distracting stimuli</td>
<td>normal; attention to outside stimuli does not impair efficiency</td>
<td>easily distracted by extraneous stimuli or by own ideas, but returns readily to task</td>
<td>abstracted; difficult to get and hold attention</td>
</tr>
</tbody>
</table>

TEST SUMMARY

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td></td>
<td>VI</td>
<td></td>
<td>XIII</td>
<td></td>
</tr>
<tr>
<td>II-6</td>
<td></td>
<td>VII</td>
<td></td>
<td>XIV</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td></td>
<td>VIII</td>
<td></td>
<td>A.A.</td>
<td></td>
</tr>
<tr>
<td>III-6</td>
<td></td>
<td>IX</td>
<td></td>
<td>S.A.I.</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td>X</td>
<td></td>
<td>S.A. II.</td>
<td></td>
</tr>
<tr>
<td>IV-6</td>
<td></td>
<td>XI</td>
<td></td>
<td>S.A. III.</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td>XII</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td></td>
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</tbody>
</table>

HOUGHTON MIFFLIN COMPANY
BOSTON · NEW YORK · CHICAGO · DALLAS · ATLANTA · SAN FRANCISCO
The Riverside Press Cambridge
YEAR II (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Three-hole form board (1+)  
   a)  
   b)  

☐ 2. Identifying objects by name (4+)  
   a) Kitty  
   b) Button  
   c) Thimble  
   d) Cup  
   e) Engine  
   f) Spoon  

☐ 3.*Identifying parts of the body (same as II-6, 2) (3+)  
   a) Hair  
   b) Mouth  
   c) Ears  
   d) Hands  

☐ 4. Block building: Tower  

☐ 5.*Picture vocabulary (same as II-6, 4; III, 2; III-6, 2; IV, 1) (2+)  
   1. Shoe  
   2. Clock  
   3. Chair  
   4. Bed  
   5. Scissors  
   6. House  
   7. Table  
   8. Hand  
   9. Fork  
   10. Basket  
   11. Glasses  
   12. Gun  
   13. Tree  
   14. Cup  
   15. Umbrella  
   16. Pocket knife  
   17. Stool  

☐ 6.*Word combinations  
   Alternate. Obeying simple commands (same as III-6, 1) (2+)

Mos............................

YEAR II–6 (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Identifying objects by use (same as III–6, 5) (3+)  
   a) Cup  
   b) Shoe  
   c) Penny  
   d) Knife  
   e) Automobile  
   f) Iron  

☐ 2. Identifying parts of the body (same as II, 3) (4+)  

☐ 3.*Naming objects (4+)  
   a) Chair  
   b) Automobile  
   c) Box  
   d) Key  
   e) Fork  

☐ 4.*Picture vocabulary (same as II, 5; III, 2; III–6, 2; IV, 1) (9+)  

☐ 5.*Repeating 2 digits (1+)  
   a) 4–7..............................  
   b) 6–3..............................  
   c) 5–8..............................  

☐ 6. Three-hole form board: Rotated (II, 1 must precede) (1+)  
   a)  
   b)  

   Alternate. Identifying objects by name (same as II, 2) (5+)

Mos............................

Note. — The tests marked with an * constitute an abbreviated scale, for use in case there is not time to give a complete test. See page 31 of "Measuring Intelligence."
YEAR III (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1. Stringing beads (4+) (2 min.) No. strung..............................

☐ 2. *Picture vocabulary (same as II, 5; II-6, 4; III-6, 2; IV, 1) (12+)

☐ 3. *Block building: Bridge

☐ 4. *Picture memories (1+) a) b) c)

☐ 5. Copying a circle (1+) a) b) c)

☐ 6. *Repeating 3 digits (1+)
   a) 6-4-1..............................  b) 3-5-2..............................  c) 8-3-7..............................
   Alternate. Three-hole form board: Rotated (same as II-6, 6) (2+)

Mos..............................

YEAR III-6 (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1. *Obeying simple commands (3+)
   a) b) c)

☐ 2. *Picture vocabulary (same as II, 5; II-6, 4; III, 2; IV, 1) (15+)

☐ 3. Comparison of sticks (3 of 3, or 5 of 6)
   a) b) c) d) e) f)

☐ 4. Response to pictures I (2+)
   a) Dutch Home
   b) Canoe
   c) Postoffice

☐ 5. *Identifying objects by use (same as II-6, 1) (5+)

☐ 6. *Comprehension I (1+)
   a) b)
   Alternate. Drawing a cross

Mos..............................
YEAR IV (6 tests, 1 month each; or 4 tests, 1\(\frac{1}{2}\) months each)

\[1^*\] Picture vocabulary (same as II, 5; II–6, 4; III, 2; III–6, 2) (16+)

\[2^*\] Naming objects from memory (2+)  
  a)  
  b)  
  c)

\[3^*\] Picture completion: Man (same as V, 1) (1 point)

\[4^*\] Pictorial identification (3+)
  
  a) Stove  
  b) Umbrella  
  c) Cow  
  d) Rabbit  
  e) Moon  
  f) Cat

\[5^*\] Discrimination of forms (8+)  
  No. correct.........................

\[6^*\] Comprehension II (2+)
  
  a)  
  b)

Alternate. Memory for sentences I (1+)
  
  a) We are going to buy some candy for mother.  
  b) Jack likes to feed the little puppies in the barn.

Mos...............................

YEAR IV-6 (6 tests, 1 month each; or 4 tests, 1\(\frac{1}{2}\) months each)

\[1^*\] Aesthetic comparison (3+)  
  a)  
  b)  
  c)

\[2^*\] Repeating 4 digits (1+)
  
  a) 4–7–2–9.........................  
  b) 3–8–5–2.........................  
  c) 7–2–6–1.........................

\[3^*\] Pictorial likenesses and differences (same as VI, 5) (3+)
  
  a)  
  b)  
  c)  
  d)  
  e)

\[4^*\] Materials (2+)  
  a) Chair  
  b) Dress  
  c) Shoe

\[5^*\] Three commissions (3+)  
  a)  
  b)  
  c)

\[6^*\] Opposite analogies I (same as VII, 5) (2+)
  
  a)  
  b)  
  c)  
  d)  
  e)

Alternate. Pictorial identification (same as IV, 4) (4+)

Mos...............................

YEAR V (6 tests, 1 month each; or 4 tests, 1\(\frac{1}{2}\) months each)

\[1^*\] Picture completion: Man (same as IV, 3) (2 points)

\[2^*\] Paper folding: Triangle

\[3^*\] Definitions (2+)
  
  a) Ball  
  b) Hat  
  c) Stove

\[4^*\] Copying a square (1+)  
  a)  
  b)  
  c)

\[5^*\] Memory for sentences II (1+)
  
  a) Jane wants to build a big castle in her playhouse.  
  b) Tom has lots of fun playing ball with his sister.

\[6^*\] Counting four objects (2+)  
  a)  
  b)  
  c)

Alternate. Knot

Mos...............................

(There is no heading V–6 and there are only six months of credit between the headings Year V and Year VI because each group of tests covers the period immediately preceding its age heading, in this case the period from Year IV–6 to Year V.)
YEAR VI (6 tests, 2 months each; or 4 tests, 3 months each)

- 1. *Vocabulary (5+) No. words
- 2. *Copying a bead chain from memory I (2 min.)
- 3. Mutilated pictures (4+)
   - a) b) c) d) e)
- 4. *Number concepts (3+)
   - a) b) c) d)
- 5. *Pictorial likenesses and differences (same as IV-6, 3) (5+)
- 6. Maze tracing (2+)
   - a) b) c)

Mos.
YEAR VII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Picture absurdities I (3+)
   a)
   b)
   c)
   d)

☐ 2.*Similarities: Two things (2+)
   a) Wood and coal
   b) Apple and peach
   c) Ship and automobile
   d) Iron and silver

☐ 3.*Copying a diamond (2+)
   a) b) c)

☐ 4. Comprehension III (2+)
   a)
   b)
   c)

☐ 5.*Opposite analogies I (same as IV-6, 6) (5+)
   a) b) c) d) e)

☐ 6.*Repeating 5 digits (1+)
   a) 3-1-8-5-9................................. b) 4-8-3-7-2................................. c) 9-6-1-8-3.................................

Mos...............................

YEAR VIII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1.*Vocabulary (8+) No. words.....................

☐ 2. Memory for stories: The Wet Fall (5+)
   a) ............................................ b) ............................................ c) ............................................ d) ............................................
   e) ................................................................................ f)

☐ 3.*Verbal absurdities I (3+)
   a)
   b)
   c)
   d)
4. Similarities and differences (3+)
   a) Baseball — orange
   b) Aeroplane — kite
   c) Ocean — river
   d) Penny — quarter

5. Comprehension IV (2+)
   a)
   b)
   c)

6. Memory for sentences III (1+)
   a) Fred asked his father to take him to see the clowns in the circus.
   b) Billy has made a beautiful boat out of wood with his sharp knife.

Mos.

YEAR IX (6 tests, 2 months each; or 4 tests, 3 months each)

1. Paper cutting I (same as XIII, 3) (1+) a) b)
1. *Vocabulary (11+)  No. words... 

2. Picture absurdities II — Frontier Days

3. *Reading and report (35 seconds, 2 errors, 10 memories)
   Memories........................................ Time for reading.............................. Mistakes......................................
   New York | September | 5th. | A fire | last night | burned | several houses | near the center | of the city. | It took some time | to put it out. | The loss | was fifty thousand | dollars, | and seventeen | families | lost their homes. | In saving | a girl | who was asleep | in bed, | a fireman | was burned | on the hands.

4. *Finding reasons I (2+)
   a)
   b)

5. *Word naming (28 words in one minute)

6. Repeating 6 digits (1+)
   a) 4-7-3-8-5-9..................... b) 5-2-9-7-4-6..................... c) 7-2-8-3-9-4.....................

YEARS XI (6 tests, 2 months each; or 4 tests, 3 months each)

1. *Memory for designs (same as IX, 3) (1½+)

2. *Verbal absurdities III (2+)
   a)
   b)
   c)

3. *Abstract words I (3+)
   a) Connection
   b) Compare
   c) Conquer
   d) Obedience
   e) Revenge

4. Memory for sentences IV (1+)
   a) At the summer camp the children get up early in the morning to go swimming.
   b) Yesterday we went for a ride in our car along the road that crosses the bridge.

5. Problem situation

6. *Similarities: Three things (3+)
   a) Snake — cow — sparrow
   b) Rose — potato — tree
   c) Wool — cotton — leather
   d) Knifeblade — penny — piece of wire
   e) Book — teacher — newspaper

Mos.................................
YEAR XII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. *Vocabulary (14+)  No. words...  
☐ 2. *Verbal absurdities II (same as IX, 2) (4+)
☐ 3. Response to pictures II: Messenger Boy

☐ 4. Repeating 5 digits reversed (1+)
   a) 8-1-3-7-9  
   b) 6-9-5-8-2  
   c) 5-2-9-4-1

☐ 5. *Abstract words II (same as XIV, 6) (2+)
   a) Constant  
   b) Courage  
   c) Charity  
   d) Defend

☐ 6. *Minkus completion (same as S.A. I, 3) (2+) (5 min.)

Mos..............................

YEAR XIII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Plan of search
☐ 2. Memory for words (1+)
   a) Cow, sand, glass, chair, bell.  
   b) Grace, truth, worth, peace, doubt.
☐ 3. *Paper cutting I (same as IX, 1) (2+)
☐ 4. *Problems of fact (2+)
   a)  
   b)  
   c)
☐ 5. *Dissected sentences (2+) (1 min. ea.)
   a)  
   b)  
   c)
☐ 6. *Copying a bead chain from memory II (2 min.)

Mos..............................

YEAR XIV (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. *Vocabulary (16+)  No. words....................
☐ 2. *Induction  a)  b)  c)  d)  e)  f)  Rule:
☐ 3. Picture absurdities III: The Shadow

☐ 4. *Ingenuity (same as A.A., 6) (1+) (3 min. ea.)
   a)  
   b)  
   c)
☐ 5. Orientation: Direction I (3+)  a)  b)  c)  d)  e)
☐ 6. *Abstract words II (same as XII, 5) (3+)

Mos..............................
AVERAGE ADULT (8 tests, 2 months each; or 4 tests, 4 months each)

1. *Vocabulary (20+)  No. words
2. *Codes (1½+)  (3 min. ea.)  a)     b)
3. *Differences between abstract words (2+)  
   a) Laziness and idleness
   b) Poverty and misery
   c) Character and reputation
4. Arithmetical reasoning (2+)  (1 min. ea.)  a)     b)     c)
5. Proverbs I (2+)
   a)
   b)
   c)
6. *Ingenuity (same as XIV, 4)  (2+)  (3 min. ea.)
7. Memory for sentences V  (1+)
   a) The red-headed woodpeckers made a terrible fuss as they tried to drive the young away from the nest.
   b) The early settlers had little idea of the great changes that were to take place in this country.
8. Reconciliation of opposites (same as S.A. II, 5)  (3+)
   a) Heavy — light  d) More — less
   b) Tall — short  e) Outside — inside
   c) Sick — well  f) Asleep — awake

SUPERIOR ADULT I (6 tests, 4 months each; or 4 tests, 6 months each)

1. *Vocabulary (23+)  No. words
2. Enclosed box problem  (3+)  a)     b)     c)     d)
3. *Minkus completion (same as XII, 6)  (3+)  (5 min.)
4. *Repeating 6 digits reversed  (1+)
   a) 4-7-1-9-5-2
   b) 5-8-3-6-9-4
   c) 7-5-2-6-1-8
5. *Sentence building  (2+)
   a) Benefactor — institution — contribution
   b) Civility — requirement — employee
   c) Attainment — fortune — misery
6. Essential similarities  (2+)
   a) Farming and manufacturing
   b) Melting and burning
   c) An egg and a seed
SUPERIOR ADULT II (6 tests, 5 months each; or 4 tests, 7½ months each)

☐ 1. *Vocabulary (26+) No. words

☐ 2. *Finding reasons II (2+)
  
  a)

  b)

☐ 3. *Repeating 8 digits (1+)
  
  a) 7-2-5-9-4-8-3-6
  
  b) 4-7-1-5-3-9-6-2
  
  c) 4-1-9-3-5-8-2-6

☐ 4. *Proverbs II (2+)
  
  a)

  b)

☐ 5. Reconciliation of opposites (same as A.A., 8) (5+)

☐ 6. Repeating thought of passage: Value of Life

Many opinions have been given on the value of life. | Some call it good, | others call it bad. | It would be nearer correct to say that it is mediocre, | for on the one hand our happiness is never as great as we should like, | and on the other hand our misfortunes are never as great as our enemies would wish for us. | It is this mediocrity of life which prevents it from being radically unjust.

SUPERIOR ADULT III (6 tests, 6 months each; or 4 tests, 9 months each)

☐ 1. *Vocabulary (30+) No. words

☐ 2. *Orientation: Direction II (2+)
  
  a)  
  
  b)

☐ 3. *Opposite analogies II (2+)
  
  a)  
  
  b)  
  
  c)

☐ 4. Paper cutting II

☐ 5. *Reasoning (5 min.)

☐ 6. Repeating 9 digits (1+)
  
  a) 5-9-6-1-3-8-2-7-4
  
  b) 9-2-5-8-4-1-7-3-6
  
  c) 4-7-2-9-1-6-8-5-3

Mos.
MINUS COMPLETION

VOCABULARY

1. orange
2. envelope
3. straw
4. puddle
5. tap
6. gown
7. eyelash
8. roar
9. scorch
10. muzzle
11. haste
12. lecture
13. Mars
14. skill
15. juggler
16. brunette
17. peculiarity
18. priceless
19. regard
20. disproportionate
21. shrewd
22. tolerate
23. stave
24. lotus
25. bewail
26. repose
27. mosaic
28. flaunt
29. philanthropy
30. ochre
31. frustrate
32. incrustation
33. milksop
34. harpy
35. ambergris
36. piscatorial
37. depredation
38. perfunctory
39. limpet
40. achromatic
41. casuistry
42. homunculus
43. sudorific
44. retroactive
45. parterre
READING CAPACITY TEST

BY DONALD D. DURRELL
Professor of Education and Director of the Educational Clinic
Boston University

AND HELEN BLAIR SULLIVAN
Associate Director of the Educational Clinic
Boston University

PRIMARY TEST: FORM A

Name...................................... Grade...................... Teacher...................... Boy or girl ........
Age.......................... When is your next birthday?......................... How old will you be then? ........
Name of school........................ City and State......................... Date.........................

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>Grade Equivalent</th>
<th>Age Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Word Meaning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Paragraph Meaning</td>
<td></td>
<td></td>
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<tr>
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Patent No. 1,586,628

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TEST 1. WORD MEANING

I

1

2

3

4

5

6

7

8

A( )

B( )

C( )

D( )

E( )

II

1

2

3

4

5

6

7

8

A( )

B( )

C( )

D( )

E( )

III

1

2

3

4

5

6

7

8

A( )

B( )

C( )

D( )

E( )

IV

1

2

3

4

5

6

7

8

A( )

B( )

C( )

D( )

E( )
TEST 3. SPELLING

1. ________________________

2. ________________________

3. ________________________

4. ________________________

5. ________________________

6. ________________________

7. ________________________

8. ________________________

9. ________________________

10. _______________________ 26. _______________________

11. _______________________ 27. _______________________

12. _______________________ 28. _______________________

13. _______________________ 29. _______________________

14. _______________________ 30. _______________________

15. _______________________ 31. _______________________

16. _______________________ 32. _______________________

17. _______________________ 33. _______________________

18. _______________________ 34. _______________________

19. _______________________ 35. _______________________

20. _______________________ 36. _______________________

21. _______________________ 37. _______________________

22. _______________________ 38. _______________________

23. _______________________ 39. _______________________

24. _______________________ 40. _______________________

25. _______________________ 41. _______________________
The little girl was happy to have her kitten again. The man went up the tree and carried the little blackie down. The little girl was friedly her father called the tree little. He sent a greaman with a ladder. The would want his supper enough to try to come down. But he would not come. He called to blackie and showed him dish of milk. Hoping he would try to come down. The little girl who owned him and stood beneath the tree. After he got high up in the branches, he was frightned and ran up a tree. One day a big dog chased him. He became
Sugar beets must be raised where cheap labor can be secured because the plants require a great deal of cultivation. Most of which must be done by hand. First the plants are thinned and then blocked to get the correct number in the rows. The roots from which the sugar is extracted are not the red beets and boiled into beet syrup. Then the syrup is changed to a brown sugar called and boiled into beet syrup. The last step is to send the raw sugar through the refinery, where it is cleaned and whitened. Then the white sugar is ready to be boxed and sold for use in our homes.

Sugar beets must be raised where labor is not expensive because they require

1. Much care
2. Much boiling
3. Many plants in a row
4. Soaking in water
5. Mixed with turpentine

The best labor for this story is

1. Machine
3. Difficult
4. Easy
5. Unusual

The raw sugar is

1. Made into syrup
2. Refined and whitened
3. Changed to brown sugar
4. Cleaning Raw Sugar
5. How Beet Sugar Is Obtained

In making beet sugar the beets are

1. Cut into pieces
2. Eaten as vegetables
3. Mixed with turpentine
4. Pressed in a mill
5. The first ground up
Sitting bird life with a camera is certainly an entertaining sport. One can

In

VI

When BII approached, the pony was — I tried and broken 2 gauntlets in split

The best title for this story is —

I withdrew his rider 2 and the boy

I overbalanced 2 exhalted 2 overpowered 4 distracted 2 Restored

I smelled his rider 4 exhaust the animal 2 pull Bull

I Kined the Knave 2 An Exhausted Pony 3 Breathing a Pony

I Appear of a Pony 4 A Persistent Pony

I saw, could not, and withdrew

I Kined the Knave —

I knew that the Connie, the pony, was very

I knew that the pony was 

I was, and I knew that

I was when I first thougth that the pony had been subdued, his

spirit was still unbroke.
The St. Bernards are among the bravest of dogs. They are large and very strong. In Switzerland these dogs are trained to go out and find travelers who are lost in the snowdrifts on the high mountains. A first-aid kit containing food and medicine is hung on their necks, and a warm blanket is strapped on their backs. When they find the lost travelers, they dig them out of the snow and help them if they are awake and able to move. If the traveler is injured and helpless, the dog is trained to go back to the town below and bring aid.

What is the most valuable thing that St. Bernard dogs do?
1. They can dig snowdrifts.
2. They can rescue lost travelers.
3. They are trained to carry first-aid kits.
4. They help mountain climbers.
5. They protect livestock from wolves.

The St. Bernard dog is
1. Slowly
2. Speedy
3. Courageous
4. Rough
5. Fierce

How does the dog assist the traveler?
1. By digging large holes in the snow
2. By covering the traveler with a blanket
3. By climbing the drifts to the traveler
4. By bringing the first-aid kit
5. By carrying food and medicine

The best title for this story is
1. The St. Bernard dog
2. The Heroic St. Bernard Dog
3. A Strange St. Bernard Dog

What do the dogs do to carry the first-aid kit?
1. They carry it themselves.
2. They carry it on their backs.
3. They carry it in their mouths.
4. They carry it in their paws.
5. They carry it on their tails.

The camel possesses a most uncommon body, which almost seems made to order for the many purposes he fills in the life of the desert. His mouth is peculiarly adapted for securing food. The strong, plump, and powerful teeth enable him to tear off the dry shrubs and stiff, prickly cactus of the desert. His huge nostrils allow him to breathe deeply. He is also provided with inside reservoirs, which hold enough water to last him for four or five days. Unfortunately, the only trick he ever learns is to lie down at a given signal. Although the camel is neither fast nor fat, he is nevertheless valuable, for without him many portions of the earth would remain untraveled.

What is the camel more capable of learning?
1. More than the horse
2. Less than the horse
3. More difficult than the horse
4. Less difficult than the horse
5. Equally difficult as the horse

The camel is
1. More cautious than the horse
2. More active than the horse
3. More intelligent than the horse
4. More unwise than the horse
5. More kind than the horse

How the camel was created
1. In the desert
2. In the mountains
3. In the sea
4. In the forest
5. In the laboratory
In the summer time the animals which sleep through the winter make their winter dens.

The animals which sleep in winter are large and hungry animals. They do not move about until spring comes once more. When they come out, they are very thin and hungry. During the winter, they crawl into caves or hollow trees when winter comes and stay there. Some animals sleep all winter, while others grow hogs in the summer and when it is time to go out, they have food in their bellies.

In the cold northlands many animals go to sleep for the whole winter. They are sleeping.

1. How do the animals in the story prepare for the long winter?

II

III


10. Jack's grandfather helps him because he is glad to have some fish for the winter.

11. Jack goes away. The brook was near Grandfather's house. He is glad to be there.

12. A trip to Grandfather's house is the best name for this story.

13. Jack helped 2 men fish. He is a friend of the fisherman.

14. Jack went to a stream to buy a fish line. He bought a fish line.

15. Jack's friend lives near the ocean. He took a fish line to the ocean.

16. Jack and his father went to the ocean to fish. He was happy when he saw his friend pull at his line. He tried hard to pull the fish out of the water, but it pulled so hard his father had to help him. He was happy when he saw his friend's house. Jack was the first to reach a bridge. There was a strong pull at his line. He tried hard to pull the fish out of the water, but it pulled so hard his father had to help him.
Mary and John enjoy camp because they had fun and played games together every day.

I. One Warm Day

1. Helen and her aunt went a trip to the beach.
2. They gathered shells and painted lunch outdoors.
3. The weather was grey.
4. They went for a swim, and one of them went ashore.
5. Helen and her brother did.

Sample:

2 PARENGAPAR MEANING
donkey
had
come
play
boy
chair
doorstep
through
stone