

**RELATIONSHIP OF PRONUNCIATION OF NONSENSE
SYLLABLES TO READING ACHIEVEMENT**

BY

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RELATIONSHIP OF PRONUNCIATION OF NONSENSE SYLLABLES
TO READING ACHIEVEMENT

A Research Paper
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in Education

by
Faye Bernardette Chapel
May 1970

To the Graduate Council:

I am submitting herewith a Research Paper written by Faye Bernardette Chapel entitled "Relationship of Pronunciation of Nonsense Syllables to Reading Achievement." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education, with a major in Curriculum and Instruction.


Major Professor

Accepted for the Council:


Dean of the Graduate School

ACKNOWLEDGMENTS

The writer wishes to express sincere gratitude to Mrs. Elsie P. Oakley, major professor, Dr. Bryan Crutcher, and Mr. Hayden Jolly for advice and suggestions throughout this study and in the preparation of this report.

The writer is also grateful for the assistance received from Mr. Oakley, Mrs. Grace Cunningham and the third grade teachers at Moore Elementary School, without whose cooperation this study could not have been made.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
Chapter	
1. THE PROBLEM	1
Statement of the Problem	1
Importance of this Study	1
Definition of terms	2
Assumptions and Limitations of the Study .	3
Overview of the Study	4
2. REVIEW OF THE LITERATURE	6
Methodology	6
Visual Discrimination and Perception . . .	12
Auditory Discrimination and Perception . .	13
3. DESIGN OF THE STUDY	15
Sources of Data	15
Survey of Materials	16
Method of Procedure	16
Data Analysis	17
4. THE INVENTORY RESULTS	19

Chapter	Page
5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .	21
Summary	21
Conclusions	22
Recommendations	23
BIBLIOGRAPHY	25
APPENDICES	28
A. Materials Used	29
B. Collected Data	36

LIST OF TABLES

Table		Page
1.	Scores and Averages on Gates MacGinitie Test and Test of Nonsense Syllables for Total Group	37
2.	Scores and Averages on Gates MacGinitie Test and Test of Nonsense Syllables for Boys. .	38
3.	Scores and Averages on Gates MacGinitie Test and Test of Nonsense Syllables for Girls .	39

Chapter 1

THE PROBLEM

Statement of the Problem

The purpose of this study was to determine the relationship between silent reading ability and the ability to pronounce words through a workable knowledge or rules based on phonic generalizations. Concern with these elements led to the debate over the proper method of teaching reading. Despite extensive research, there was little agreement in this matter.

There is no relationship between silent reading ability, ability to pronounce word sounds, and knowledge of rules concerning pronunciation.

Importance of this Study

The trend toward independent study has to some extent lessened the verbalization of reading instruction. The results of such a trend have been evidenced by research projects such as this one. The results of this study will help to determine the need for greater or less emphasis upon the student's ability to pronounce words in relation to his overall reading skills as measured by standardized reading tests such as the Gates MacGinitie Reading Test. Clear-cut evidence of such a relationship

over an extended period may result in the publication of educational materials with a greater concentration upon verbalization of words.

The author discovered a reading text which does include such materials on a very limited scale. The child would feel more confident in his reading performance if he were able to read the materials to others with ease.¹ Ann Ess Morrow, a reading specialist, stated that the very act of vocalizing words of skill and artistry made the child aware of potentialities and of effectiveness in speech.²

DEFINITION OF TERMS

In this paper the following terms were referred to repeatedly: nonsense, verbalization, and phonetic analysis. There seems to be some misunderstanding of these terms among teachers. Perhaps it was a misunderstanding of such terms which caused much of the disagreement concerning the various teaching procedures. The last two terms, particularly, have often been perceived quite differently by teachers, consequently their application has often been vague and confused.

¹Gainsburg, Joseph C., "How To Pronounce Words Correctly," Building Reading Confidence (New Jersey: Hammond Incorporated, 1962), pp. 19-21.

²Morrow, Ann Ess, "Moral: Go Oral--Some of the Time," Readings on Reading Instruction (New York: David McKay Company, Inc., 1963), pp. 394-95.

Nonsense, in this paper, referred to letter combinations which were not meaningful words. The nonsense words were composed according to a list of phonic generalizations. The letter combinations were such that they could be easily pronounced by a student on the third grade level if the child were aware of some of the basic rules of word recognition.³

Verbalization was the act of pronouncing the sounds which the children perceived when presented with various letter combinations. The test given in this study was dependent upon verbalization.

Phonetic analysis in reading consisted of identifying by sound out loud or to oneself the letters and letter combinations which make up the pronounceable units of the word.⁴

ASSUMPTIONS AND LIMITATIONS OF THE STUDY

The effectiveness of this research was limited to some degree by the size of the sampling. The number of subjects included thirty third grade children. The grouping of subjects heterogeneously did, however, counteract the effects of a limited number of subjects.

³Clymer, Theodore, The Utility of Forty-Four Phonic Generalizations, University of Minnesota IRA-NCRE, St. Louis, May 5, 1961.

⁴Tinker, Miles A., and Constance M. McCullough, Teaching Elementary Reading (New York: Appleton-Century-Crofts, Inc., 1962), p. 153.

It was suggested to the author that several Negro children included in the study may have incurred some difficulty in the pronunciation of the nonsense words unrelated to their reading ability.

The standardized test was assumed to be valid and reliable. The test was administered by the Clarksville-Montgomery County School System to all elementary schools receiving Title I funds.⁵ Likewise the informal test of nonsense words was assumed to be dependable. The test was composed by the author with the advice of Mr. Hayden Jolly. Validity of this test was unknown prior to testing.

OVERVIEW OF THE STUDY

Third grade children were chosen for the study because this was the grade level at which most children begin to organize their knowledge of pronunciation rules into a workable system by which words can be pronounced.

The nonsense words chosen for the test were arranged in a manner which would closely resemble actual words in an effort to keep the words from looking overly strange to the children.

The data collected from the tests were recorded in tables to give a more graphic representation of the results of the research. Samples of the two tests which

⁵Gates-MacGinitie Reading Tests, Primary C. Form 1, Teachers College Press, Teachers College, Columbia University, New York, 1964.

were correlated were included in the paper to give the reader a clear impression of the materials used in testing.

Chapter 2

REVIEW OF THE LITERATURE

METHODOLOGY

In 1964, the United States Office of Education supported a study by J. Wesley Schneyer. The primary purpose of this was to compare at the end of the third grade, the reading and spelling achievement of pupils at three ability score levels, who were initially taught by a linguistic approach or a basal reader approach. The criterion measure administered to all pupils at the end of the third grade was the Stanford Achievement Test. Oral reading tests were administered individually to pupils by the project supervisors. The only significant differences between treatments were on the Word Study Skills Subtests and the rate scales on the oral test.

The basal Reader group scored significantly higher on the Word Study Skills, while the Linguistics Group performed better on the oral tests.⁶ Such results seemed logical and appropriate. The author was interested in seeing if the present research would bear out a conclusion

⁶Schneyer, J. W. "Reading Achievement of First Grade Children Taught By A Linguistic Approach Extended Into Third Grade," Reading Teacher, 22:523-7, March 1969.

similar to the one just mentioned. It was hoped that this research would point up better word identification skills by the group who performed best on pronunciation of the words.

A similar study was conducted by William D. Sheldon and Donald R. Lashinger in 1966. They attempted to make a comparison between methods of teaching reading to first grade classes. They found no significant results from their research at that time.⁷

In 1969, they did a follow-up study of these children to determine the effects of the various methods of teaching over a longer period of time. The three approaches were basal reader, linguistic, and modified linguistics. The only significant difference was in word recognition in which the modified linguistic group was superior to the other two.⁸

Linguists often complain that children do not engage in enough verbal activity while learning the basic reading skills.⁹ Research was performed in this area by

⁷Sheldon, William D. and Donald R. Lashinger, "Effect of First Grade Instruction Using Basal Readers, Modified Linguistic Materials, and Linguistic Readers," Reading Teacher, Vol. 19, no. 8, May 1966, p. 576.

⁸Sheldon, William D., "Comparison of Three Methods of Reading: A Continuation Study in the Third Grade," Reading Teacher, 22:523-7, March 1969.

⁹Harris, Theodore L., Summary and Review of Investigations Relating To Reading, July 1, 1965 to June 30, 1966, Journal of Educational Research, September 1966.

King and Muehl in 1966. Five methods of training that differed with respect to cues given in addition to the printed word were used: pictorial representation of the object named, picture plus verbalization of the word by the experimenter and the subject, no picture but verbalization by the experimenter, picture plus verbalization by the experimenter and the subject, no picture but verbalization by researcher, no picture but verbalization by researcher and the subject. The major finding was that the order of difficulty for methods was reversed when similar and dissimilar words were compared. Auditory cues seemed to be more effective in this study than were visual cues.¹⁰

The conclusions of a later study by King indicate that prereading and beginning reading programs could usefully be modified to include visual and auditory discrimination training that begins with the simple task of matching individual letters and moves to the more difficult task of discriminating words made meaningful by associating sound and meaning to the visual forms.¹¹

Research conducted by Ryan and Muehl suggested that children need more information than adults do in recognizing an unfamiliar word.¹²

¹⁰Ibid.

¹¹Ibid., p. 298.

¹²Ibid., p. 299.

A study was conducted by John D. McNeil and Janis Stone to test the hypothesis that children learn to identify sounds in spoken words better through practice with nonsense than with familiar words. Results of this study indicated that children trained with nonsense words made fewer errors during the training period.¹³ On the criterion tests they did significantly better in identifying sounds found in both nonsense and familiar words: this was significant at the .01 level of confidence.

This type of research formed the crux of the study. The writer was interested in determining if the children who correctly pronounced the largest number of nonsense words also had a greater overall reading capability. Additional research conducted by McNeil and Keislar concluded that oral responses required of beginning readers facilitated the recognition and comprehension of printed words.¹⁴

As the enrollment in public schools increases educators will be faced with an ever greater problem of trying to furnish instruction unless some program is established which will provide part-time teachers or teacher aides to work in the classroom.

¹³McNeil, John D. "Note on Teaching Children to Hear Separate Sounds in Spoken Words," Journal of Educational Psychology, 56:13-14, May 1965.

¹⁴Ibid., 15.

A book by Arthur W. Heilman dealt with the methodology involved in teaching auditory-visual discrimination in the child's ability to read to say words. The successful teaching of all subsequent steps in phonic analysis was based on skill in discriminating between speech sounds in words. The ability to make or use all English speech sounds in words would not assure the ability to discriminate between individual phonemes in words. Phonics instruction has been aimed at instant association of a particular sound with a given letter cue. There were many ways in which this discrimination could be taught. Children could listen while the teacher pronounced a series of words all of which begin with the same consonant sound: belt, ball, bird, be, bone. Children could then volunteer words beginning with the same sound.¹⁵

There were a number of informal lessons which could be composed by the teacher to meet the needs of her particular students in carrying out the teaching procedure just mentioned. There have been numerous books of word games which might be purchased for use in the classroom which have explanations of the phonic principles to be taught and illustrations of the most effective ways in which the word games might be conducted.

¹⁵Heilman, Arthur W., Phonics in Proper Perspective, (Columbus, Ohio: Charles E. Merrill Publishing Company, 1969), pp. 32-3.

The following statements concerning research conducted by Silberman under the auspices of the Department of Health, Education, and Welfare were concerned with the area of instructional technique.

Part of the program was involved in teaching children at the first-grade level how to phoneticize trigrams. This was an effort to determine whether frequent exposure to words in various contexts would result in inductive recognition of letter-sound relationships which would enable the children to attack unknown words with some degree of independence. The research indicated that additional sensory input such as oral reaction to learned material was beneficial with visual and auditory clues. In addition, Silberman's work seemed to indicate that such material was best presented by a human model.¹⁶

The average pupil in the third grade should be able to apply rules of a certain aspect of his language, one particular sound, with one particular letter. Some guidebooks have offered lists of words to be analyzed, with the direction that they were to be "presented to the class to be pronounced."

¹⁶Silberman, Harry, "Experimental Analysis of a Beginning Reading Skill," Technical Memorandum, Systems Development Corporation, (Santa Monica, California, 1968), pp. 230-31.

VISUAL DISCRIMINATION AND PERCEPTION

In 1966, Arthur Olson conducted a study to determine the relationship between school achievement, reading ability, and specific visual perception skills in the third grade. The results of the third grade population on the Frostig Developmental Test of Visual Perception indicated that the total test was a fair predictor of school achievement and specific skill ability.¹⁷

Studies conducted by Anderson and Dearborn (1952) suggested that "what children mainly seem to have an eye for is some detail of the word, a single letter or two which comes to stand for the whole word . . ." When a child provides a response to a new configuration of letters on the basis of a single letter cue he may not even recognize that he has made an error until it becomes obvious from reading the rest of the sentence.¹⁸ The author has noticed in previous work with poor readers that there was often a tendency for the child to look only at the first letter in a word and use it as a clue for the pronunciation of the word because he was not familiar with an adequate knowledge of word configuration.

¹⁷Olson, Arthur V., "School Achievement, Reading Ability, and Specific Visual Perception Skills in the Third Grade," Reading Teacher, XIX (April 1966), pp. 490-2.

¹⁸Ibid.

AUDITORY DISCRIMINATION AND PERCEPTION

Auditory discrimination has always been particularly important in the accurate pronunciation of words. A certain amount of competence in this area has been considered necessary for successful reading. Learning to read usually involves associating the auditory patterns learned earlier with the visual patterns of the printed page.¹⁹

Auditory perception involves the actual use of sounds in language rather than merely being able to determine what the sounds are when they are heard.²⁰

It seemed very important that the student understand not only the sounds of the letters which he has heard but also has an adequate understanding of the meaning to correctly perceive the word with which he was presented. A knowledge of meaning may aid the student in choosing between two or more pronunciations which might be almost indistinguishable in any other manner. It was found that in the primary grades when the very basic skills of reading were being learned, material was retained better when it was grouped according to pronounciability. All of these factors would be involved in auditory perception. It has

¹⁹Nurss, J. R., "Auditory and Audio-Visual Integration Skills As They Relate To Reading," Reading Teacher, 22:643-48, March 1969.

²⁰Seymour, Dorothy, "What Do You Mean Auditory Perception?", The Elementary School Journal, Ginn and Company, January 1967.

often been noted that children had difficulty in auditory perception when they were called to read aloud. They may have had difficulty in hearing correctly the sounds or in reproducing the sound which they actually heard.²¹

²¹Gibson, Eleanor J., "Comparison of Meaningfulness and Pronunciability as Grouping Principles in the Perception and Retention of Verbal Material," Journal of Experimental Psychology, LXVII (February 1964), 173-82.

Chapter 3

DESIGN OF THE STUDY

This section deals with the sources of data, the method of procedure, and the technique of data analysis. A description of the group studied was also included.

SOURCES OF DATA

The subjects for this study were third grade pupils at Moore Elementary School in Clarksville, Tennessee. The children ranged in age from seven to ten years of age. The population of students at Moore School was heterogeneous with regard to socioeconomic background, race, and educational attainment of parents. The research attempted to gain a balance with respect to the factors just mentioned. Participants for the study were selected from three classrooms.

The children were chosen according to grade-level achievement of reading indicated by the Gates-MacGinitie Reading Test. Ten children whose reading level was above third grade level were selected, with ten children being chosen at the third grade level, and ten who were below third grade level in reading. There was no distinction made between the students as they were being tested nor in

the scoring of their tests of nonsense words.

SURVEY OF MATERIALS

There were two tests employed in the study. The first was the Gates MacGinitie Reading Test which is a standardized reading test covering all phases of reading skills. The particular test used in this study was designed for the second and third grades. The form of the test was Primary C, Form 1 with two separate parts; Vocabulary and Comprehension, and Speed and Accuracy. The vocabulary section consisted of lists of words with no additional context.

The second test used in the study was an informal test of nonsense words which illustrated the knowledge of pronunciation rules and also the child's ability to reproduce the sound which he recognized. Two examples were employed to illustrate each of the twenty-nine generalizations chosen. These generalizations involved short and long vowel sounds, consonant sounds, diphthongs, digraphs, silent e, and blends.

METHOD OF PROCEDURE

First, permission was obtained from the superintendent of schools to work with the principal and third grade teachers at Moore School. The principal of the elementary school, Mrs. Grace Cunningham, was contacted and arrangements were made for testing which were convenient for both

the author and the teachers and students involved.

A list of students was composed which included ten children from each of the grade level groupings mentioned previously.

The scores from the Gates MacGinitie Reading Test were recorded for each student before the children were actually tested by the author. A chart was drawn with the scores from the standardized reading test and a space was provided for the scores derived from the test of nonsense words.

The children were called from their room two at a time and conducted to a room set aside for the testing. One child was required to wait while another was being tested.

The purpose of the test was explained to each child as he was presented with the test of nonsense words. He was instructed to say the words before him as if they were actual words. As the child pronounced the words from a standard copy, the tester had a copy of the test not seen by the child upon which errors were marked.

DATA ANALYSIS

When all the tests had been administered to the children, the tests of nonsense words were then scored. The test consisted of fifty-eight nonsense words--two words for each rule. Each word was given a weight of one point. The score was the summation of the total number of words

pronounced correctly. The score for each child was tabulated and placed on the chart.

The statistical procedure for this research involved a product-moment correlation. The Gates-MacGinitie Test scores were correlated with the scores of the informal test of nonsense words. The standard deviation for each test was tabulated. A correlation between the two tests was computed at the .01 level of significance.

The formula used for the product-moment correlation was

$$r = \frac{\sum XY - \bar{X}\bar{Y}}{\bar{X}\bar{Y}}$$

The correlation was equal to the product of $\frac{X \cdot Y}{\text{Number}}$ minus the Mean of \bar{X} and the Mean of \bar{Y} . All of this was divided by the standard deviation.

Chapter 4

THE INVENTORY RESULTS

Statistical results of the research were based upon a product-moment correlation. The mean score on the Gates MacGinitie Test for the children tested was 4.06 or fourth year, first month. This was indicative of a particularly good overall reading program in this school.

The standard deviation for the test was 17.9. This deviation was close to expectations for such a test. The higher reading level for the entire group was indicative of a wider range of reading levels than is normally found.

The test of nonsense words produced a mean score of 27 words out of a possible 58. The average score for this test was 27.3.

The standard deviation for the test of nonsense was 17.9 which is considerably above that which was expected. Scores ranged from fifty-two down to zero. This wide range of scores accounts for the high standard deviation.

The correlation between the two tests was .772. This correlation provided a firm basis for the conclusions derived from the research. The study was significant at

better than the .01 level. This significance confirmed the validity of the entire study.

An interesting observation was the fact that the boys scored slightly higher on the nonsense test than did the girls.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this research was to determine the relationship between silent reading ability and the ability to pronounce words through a workable knowledge of rules based on phonic generalizations.

The review of literature was chiefly concerned with three items as they related to the teaching of reading. The first of these was methodology. The manner in which reading is taught is the largest single contributing factor in the child's progress in the basic reading skills. The pros and cons of phonics as a part of the instructional program has been discussed for years but has seldom been understood completely in the proper perspective. The implications of a study by George D. Spache and Mary E. Baggett were that there was a need for pre-service instruction and study by primary and intermediate teachers in phonics and its principles.²²

²²Spache, George D. and Mary E. Baggett, "What Do Teachers Know About Phonics and Syllabication?", The Reading Teacher, Vol. 19, November 1965, p. 99.

Other factors included in the review of the literature were auditory discrimination and perception and visual discrimination and perception. The child's success in recognizing and pronouncing new and unfamiliar words was based upon these two essential elements. An attempt was made to adequately explain the ramifications of these elements.

Subjects for the study were thirty third-grade pupils from Moore Elementary School in Clarksville, Tennessee. The children were selected upon the basis of their standardized reading scores in grade levels from the Gates MacGinitie Reading Test.

The results confirmed a definite relationship between the ability of the child to pronounce correctly the nonsense words and his level of reading achievement as measured by a standardized group reading test. Recommendations were based upon these results.

CONCLUSIONS

On the basis of this research, the following conclusions were reached:

1. There is a significant relationship between a child's ability to pronounce nonsense syllables and his performance on standardized reading tests.
2. Many children who had reading difficulty were handicapped because they simply did not hear

or see the word correctly. The child might base his recognition of the word upon information which was incorrect or inappropriate. Many of the children tested in this research pronounced several words incorrectly because they did not hear one particular sound correctly.

3. A number of children based their pronunciation of words upon a quick glance, and did not make any attempt to analyze the word to determine which sounds should be associated with the letters. This was considered to be a common fault among children who did poorly on the test of nonsense words.
4. There is definitely a need for greater verbalization on the primary level as well as a well formulated program of phonic instruction. The children participating in the test generally looked to the tester for reinforcement following the pronunciation of each word. This seemed indicative of the need for immediate feedback and reinforcement.

RECOMMENDATIONS

In reference to the previous conclusions, the following recommendations are suggested:

1. There should be increased verbal activity in

relation to the reading program. Feedback and reinforcement were mentioned in the conclusions as important factors. Verbal activity also stimulates activity and helps the child to gain a sense of accomplishment which might be lacking in individual silent work.

2. Teachers should make an effort to ascertain the extent to which pupils actually perceive correctly the words which they are attempting to read. Misconceptions by the child, if unattended, may lead to serious reading deficiencies and reading handicaps.
3. Word games stressing auditory and visual perception should be used whenever feasible to build a firm foundation for the recognition and pronunciation of words.

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APPENDIX A

LIST OF THE READING TEST

AND THE SYLLABLES

FROM WHICH

APPENDICES

WERE DERIVED

APPENDIX A

GATES MACGINITIE READING TEST
TEST OF NONSENSE SYLLABLES
PHONIC GENERALIZATIONS FROM WHICH
NONSENSE SYLLABLES WERE DERIVED

Gates MacGinitie Reading Test
Primary C, Form 1

Print your name here

How old are you?

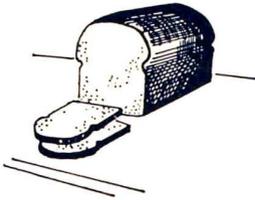
When is your birthday?

Grade Date

School Teacher

VOCABULARY SAMPLES

A.



only
before
bread
great

B. large
what
big
fun
brave

COMPREHENSION SAMPLE

Last year, for his seventh birthday, Eddie had a party at home. On his birthday this year, Eddie's father is taking him and his friend Bill to the circus.

A. Who will go with Eddie and his father?

his mother Bill Sally an uncle

B. Eddie is going to the circus on

Friday his vacation his birthday Hallowe'en

**GATES—
MACGINITIE
READING TESTS**

**C
FORM 1**

PRIMARY C, FORM 1

**Vocabulary and
Comprehension**

□ □ ■ □ □ □ □ □ □ □ □ □ □

TEACHERS COLLEGE PRESS
TEACHERS COLLEGE
COLUMBIA UNIVERSITY
NEW YORK

To the Teacher:

BE SURE to follow the directions in the Manual (included in each test package) when giving these tests. The directions will tell you how to explain the tests and how to work the sample items with the students. Allow the exact time specified in the Manual.

VOCABULARY

Number correct _____

Standard score _____

Percentile score _____

Grade score _____

COMPREHENSION

Number correct _____

Standard score _____

Percentile score _____

Grade score _____

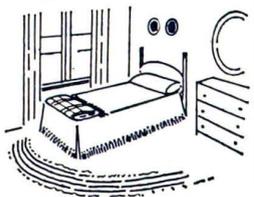
© 1964 by Teachers College, Columbia University

Printed in U.S.A.

Vocabulary

START HERE

1.



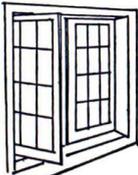
bedroom
banana
beggar
behalf

2.



whom
meet
wheel
mail

3.



number
window
winter
month

4.



plate
stamp
swim
stair

5.



plant
person
front
come

6.



dance
fence
date
prince

7.

O

radio
shore
naughty
zero

8.



servant
faint
secret
consent

9.



fast
mast
task
mask

10.



gross
greedy
prisoner
grocer

11.



pier
pitiful
piper
platter

12.



propellers
promoters
projectiles
profiles

GO ON TO
THE NEXT PAGE

13. church
fox
rose
building
green

14. market
floor
help
store
fork

15. hour
hoop
news
neck
time

16. stream
fill
brook
chief
shop

17. shore
feel
stool
beach
inside

18. pair
park
two
chirp
shell

19. enough
plenty
sick
way up
worn

20. engine
whistle
enlist
machine
display

21. mountain
morning
room
peak
letter

22. delightful
pleasing
crude
honest
scarce

23. title
tiger
stumble
picture
name

24. holiday
vacation
holy
Monday
windy

25. pledge
club
chase
beg
promise

26. jewelry
pudding
ring
legal
motor

27. hollow
empty
hatch
sinful
dishonest

28. visit
voice
call
oven
still

29. incredible
childish
unbelievable
poor
courteous

30. medicine
meadow
iron
spider
drug

31. pleasure
pretty
surprise
joy
player

32. single
one
sister
owe
suit

33. jealous
rich
envious
idea
foreign

34. fabric
falsehood
cloth
agreement
derelict

35. frailty
team
weakness
roof
family

36. sorrow
bird
secret
grief
magic

37. vegetation
plants
sleeping
chewing
alliance

38. instrument
lightning
tool
assembly
hospital

39. debate
discuss
remove
curse
sprinkle

40. uncertain
patriotic
expose
doubtful
pancake

TURN THE PAGE
AND GO ON

41. employ
punish
flatter
hire
dismiss

42. gossip
syrup
hurry
confiscate
chatter

43. nervous
uneasy
hoarse
relative
unready

44. explanation
excursion
accident
extremity
reason

45. unruly
calm
disobedient
uneven
unwise

46. recover
remain
get back
look
give up

47. record
write
swing
realize
weather

48. absurd
distant
ascend
absent
foolish

49. ghastly
imaginary
white
dripping
horrible

50. misfortune
discovery
mistake
bad luck
shot

51. efficient
competent
elegant
girlish
pompous

52. just
mean
creep
bare
fair

STOP

If a bronco buster wants to win a rodeo contest, he must observe the contest rules. One of these rules is that the rider must keep one hand in the air. A rider who does not do this is disqualified.

A. A bronco buster who ignores a rodeo rule is
skillful disqualified chosen a winner

B. In a rodeo contest a bronco buster must keep one hand
under still free hold

Yachts and pleasure cruisers usually carry a dinghy. This little rowboat can be used when those aboard the large boat want to go ashore where the water is shallow and there is no dock.

A. What is a dinghy?
cruiser dock motor boat

B. A dinghy is needed where waters are
shallow warm deep calm

The cheapest way to get logs to a mill is by water. Teak, a very valuable wood, is too heavy to float when green. Because of this, a deep cut is made around the trunk and the tree is left standing until it is dry enough to float.

A. Teak will float if it has been
dried logged transported sawed

B. Companies prefer water transportation for logs because it is less
rapid reliable expensive dangerous

We flew from New York to England on a jet plane. When we arrived in London we rented a car and drove around the British Isles, then took the car with us across the English Channel by ferry to France. In Switzerland we hiked and climbed.

A. Not once did we ride in a
boat car jet bus

B. We went to France from England by
plane bridge lift ferry

In the summer a lake is cooler than the land surrounding it, while in the winter a lake does not cool off as rapidly as the land does. Thus a breeze blowing across a lake in the summertime will be cooled, but in the winter it may be warmed.

A. A lake is likely to be colder than the land when the weather is
cold hot snowy wintry

B. Compared with the land, the temperature of a lake changes
slowly rapidly more often

When the airline pilot landed, he said, "We had a tail wind all the way." He had flown at 35,000 feet, and the jet stream, which blows from west to east at high altitudes, had helped him come in ahead of schedule.

A. In which direction had the pilot flown?
north south east west

B. The jet stream is a
wind river noise pilot

13

Tabby crept slowly toward the mirror. The kitten that she saw looking straight at her was about her own size and looked as if it wanted to play. Tabby jumped at the other kitten and bumped her nose on the glass.

A. Tabby was looking at

a puppy a mouse herself a window

B. Tabby thought the other kitten looked

friendly afraid huge mean

14

In the first colonies in America, making clothing took a long time. The women first had to spin the yarn and weave the cloth. They colored the cloth with dyes made from roots and berries. Finally they were ready to cut and sew the material into clothes for the family.

A. Clothing for the colonial family was generally made in

factories homes luxury China

B. The color for the cloth came from

pictures roots sugar dew

15

The trap-door spider lives in a burrow that it digs in the ground. It lines the burrow with silk that it has spun. A tightly fitting door of silk and mud covers the entrance to the burrow.

A. Trap-door spiders line their burrows with

mud grass silk cotton

B. What feature of its burrow gives this spider its name?

floor lining size entrance

16

The lakes Erie, Huron, Michigan, Ontario, and Superior are called the Great Lakes. Four of the lakes lie on the border between Canada and the United States. Only Lake Michigan lies completely within the United States.

A. How many Great Lakes are there?

one two four five

B. Which lake does not border upon Canada?

Michigan Huron Erie Superior

17

Most of the many kinds of mushrooms are good to eat. The few poisonous kinds of this fleshy fungus are so similar to the edible kinds, however, that only the experts can tell them apart.

A. Mushrooms are a

cereal fungus soup fruit

B. Most mushrooms are

poisonous fluid edible kind

18

Professional people may be identified by their degrees. A person with an M.D. degree is a Doctor of Medicine. D.D.S., meaning Doctor of Dental Surgery, identifies a person trained in dentistry. Ed.D. indicates a person with the degree of Doctor of Education, while Ph.D. stands for Doctor of Philosophy.

A. If you had a toothache, to which one would you go?

Ph.D. Ed.D. M.D. D.D.S.

B. An Ed.D. indicates a person specially trained in the field of

surgery education philosophy medicine

7

The fiery sun beat down on Sam as his horse plodded along. The air was still. A cloud of dust stirred up by the great herd of cattle made it hard to breathe. Sam shifted wearily in the saddle and pulled his hat down lower. "We'll be coming to the river before long," he told himself.

A. Sam was a
hunter shepherd prospector cowboy

B. Sam was headed toward the
river afternoon rain town

8

Andrew first took two long thin pieces of wood and tied them together so that they formed a cross. He then fastened strings between the four points of the cross and covered this frame with a piece of red paper. Finally he added a long string and a tail of cloth.

A. Andrew had made a
boat raft cake kite

B. Andrew used wood to make the
paper string cross cloth

9

The sap of the sugar maple tree yields two sweet products. Maple syrup is made by boiling the sap until it begins to thicken. Maple sugar requires longer boiling.

A. Maple sugar is a product of the maple tree's
seeds leaves sap roots

B. What process is used in making maple syrup?
trees boiling melting yielding

10

Carol woke up early and hurriedly ate her breakfast. Then, as soon as she was dressed, she ran down to the pond to skate.

A. Before getting dressed, Carol
skated ate played worked

B. Carol was
slow bored eager sad

11

Every morning Janet put sunflower seeds and suet in the bird feeder outside the window. Soon, with the help of a bird book, Janet could identify fourteen different kinds of bird visitors.

A. What did Janet use to identify unknown birds?
microscope museum numbers book

B. How often did Janet put out food for the birds?
monthly weekly daily hourly

12

John was making a paper bag mask. His father cut out holes for his eyes and mouth. Then John drew a face with yellow and black stripes, long black whiskers, and orange ears. When the mask was finished, he put it on and went to find his brother so he could roar at him. "Grrrrr!"

A. John pretended to be a
tiger clown bear ghost

B. His father used
paint brushes scissors paste crayons

Comprehension

START HERE

1

First Mother measured the milk, baking powder, shortening, flour, and sugar. Then she mixed these together with two beaten eggs. Finally she poured the batter into a pan and put the pan into the oven.

A. Mother was making

a cake a dress soup the beds

B. She did not use any

milk pepper eggs sugar

2

In one city, children five or under ride the bus free. For children between five and twelve years old, the fare is 10 cents. People twelve or over pay 15 cents.

A. An adult would pay

nothing 10¢ 12¢ 15¢

B. The amount a person pays depends upon his

height weight age worth

3

When Susan stepped into the living room she could not at first tell what had happened. The lamp was lying broken on the floor, and the newspaper was scattered about. But when she saw the chewed slipper, she knew who the culprit was.

A. The living room looked

neat shut bare messy

B. Who was the culprit?

the wind a burglar a puppy a bird

4

Ruth was busily getting her costume ready for the party. She had already made a tall pointed hat out of black paper. She and her mother had just finished a long black cape. The broom that she would ride was standing in the corner.

A. Ruth was going to the party as a

witch ghost cowgirl pumpkin

B. Ruth still needed a

hat cape broom mask

5

David received a card in Friday's mail. It was a reminder from his dentist that his checkup time had come. David's chart in Dr. Foster's office showed that it was six months since his last examination.

A. How often does David's dentist want to check his patients' teeth?

yearly monthly twice a year every two years

B. To keep track of his patients' dental work, David's dentist uses a

chart phone typewriter radio

6

After school, Ken delivers the paper to all the people who are on his route. While he spends some of his money, he puts most of his earnings in the bank.

A. The story says that Ken has a

bike job hobby pony

B. What does Ken do with most of his money?

saves it spends it buys it delivers it

TURN THE PAGE AND GO ON

START HERE

1. The circus is coming to the city park this week. We hope there will be animals of all kinds to see. We will laugh at the clowns. It will be

fun scary sad terrible

2. After dinner Meg cleared the table. Then she put the dishes in the sink, ran hot water, and added soap. What was she going to wash?

dishes shoes stockings food

3. Bill went shopping for Mother. He bought potatoes, peas and carrots, and bread at one store, and eggs and chicken at another store. Bill was buying

shirts food cars milk

4. Harvey took a trip across the ocean on a ship. On the second morning of the trip he went to bed. He was not well. How did he feel?

strong gay seasick pleased

5. In the summer, if it has not rained for a long time, the leaves of some plants turn brown, become dry, and then fall. What do these plants need?

flowers water trees fruit

6. Dorothy made a Christmas surprise for the birds. She tied baskets of bread crumbs on a little tree and scattered seeds on the fence. Dorothy was

silly mean kind funny

7. Tomorrow is my eleventh birthday. Then I'll be old enough to join the Boy Scouts and go camping next summer. I must be eleven years old to be a

Girl Scout pilot Camp Fire Girl Boy Scout

8. Mary was two blocks away when the last school bell rang. She ran fast but all the children had gone inside before she got to the door. Mary was

early late sleepy school

9. After the storm, the children made a snowman. They gave him a hat and pipe. When the sun came out, it got warm, and the snowman

froze melted burned grew

10. In the late afternoon, we are going to the woods to pick berries. Then Mother will make jam for next winter. What shall we pick?

jelly jello berries daisies

11. A light shines, goes off, shines again, and goes off, all night long. It is there to warn sailors that there are rocks nearby. The light comes from a

lighthouse plane fire engine candle

12. In very bad weather, Eskimos wear two suits of clothes. Both are made of fur, which keeps out the cold. These special clothes help keep the Eskimos

soft icy warm chilly

13. Uncle Ned is bringing Grandma to our house next Sunday. It is her birthday and we are giving her a party. It is a secret. Won't she be

late young supper surprised

14. There was a great storm at sea. The fisherman's wife looked out over the rough water. She could not see her husband's boat. How did she feel?

worried hot happy angry

15. It was very early in the morning of a warm summer day. The young birds were so hungry. My, what a noise they made! They wanted their

sleep lessons friends breakfast

16. Grandmother is making a sweater for Ted's birthday. He will be nine years old next Monday. She is using his school colors of blue and white. What is she making?

cap socks scarf sweater

17. It was harvest time. The corn was cut and stacked. All over the field were the big pumpkins. The boys chose the biggest for their party. When was the party?

Halloween Easter Christmas New Year's

18. Pam took the bag of clothespins off the kitchen hook. Then she took the big basket from Mother and carried it outside. What was she going to hang up?

wash books wind picture

19. The polar bear has a thick coat of fur to keep him warm in winter. His fur is the color of snow so he can hide easily. What color is this bear?

grey white black brown

20. Goldfinches are yellow. They fly from tree to tree, busily hunting bits of thread and cloth for their nests. What is a goldfinch?

person fish flower bird

21. Long ago people went west in covered wagons drawn by horses or oxen. On these long trips they were afraid of wild animals and Indians. Such trips were

dangerous nice short easy

22. Doors close with a bang. The fast subway train roars through the dark tunnel. The wheels squeal against the tracks. This ride is

silly noisy slow quiet

23. An owl is a big bird. He catches mice and small birds to eat. He can see well in the dark and does his hunting at night. When does he usually fly?

noon night morning afternoon

24. Baby chipmunks are born in dark underground tunnels. For a month they do almost nothing but eat and sleep in this tunnel. Their first home is a

tree tunnel log trunk

25. Two hundred years ago the housewife baked food in a brick oven. Instead of baking in a brick oven, the modern housewife uses the oven in a

chair wagon stove table

26. Giant shovels work quickly. They can scoop out more soil in a minute than two thousand men can dig in the same time. Huge shovels work quickly moving

house same soil sail

27. The flying squirrel has skin along its sides between its front and hind legs. This skin helps it to take such long leaps that it seems to be

running walking flying swimming

28. An old cherry tree grew beside the path that led to the kitchen door. Each summer Sandra climbed the tree and picked some sweet ripe

apples cherries plums cheers

29. The Black-Eyed Susan grows in North America. If it is put into fresh water after it is picked, it will last a week. How long will the flower last in water?

day hour month week

30. Molly had sad brown eyes and a beautiful tan coat. The farmer was proud of her for having the richest milk. Molly was a very fine

cat colt cow crow

31. Long ago men lived in caves. We think they must have built fires in front of their caves at night to keep out the wild animals. These animals made the men feel

afraid big happy tired

32. When Alice went to Jane's house, they usually played with dolls, played hopscotch, skipped, or read stories. Alice liked the second of these best. Which is it?

skipping painting dolls hopscotch

STOP

Test of Nonsense Syllables
Administered to Pupils

1.	plap	bem
2.	se	tro
3.	gafe	mue
4.	karne	forne
5.	leam	jaip
6.	scaf	doak
7.	kead	speal
8.	jeek	deen
9.	bine	sate
10.	tay	spay
11.	trigh	digh
12.	fown	jown
13.	bry	dery
14.	sare	nare
15.	chan	ratch
16.	cun	carm

17.	cils	tace
18.	gemen	algin
19.	raght	hight
20.	knor	knat
21.	wrut	wran
22.	kally	canny
23.	mock	rick
24.	casus	ramun
25.	arong	insang
26.	hoby	ramby
27.	masy	firsy
28.	racture	hasture
29.	dotion	hemtion

Phonic Generalizations

Nonsense Words

- | | | |
|---|-------|-------|
| 1. When a vowel is in the middle of a one-syllable word, the vowel is short. | plap | bem |
| 2. If the only vowel letter is at the end of a word, the letter usually stands for a long sound. | se | tro |
| 3. When there are two vowels one of which is final <u>e</u> , the first vowel is long and the <u>e</u> is silent. | gafe | mue |
| 4. The <u>r</u> gives the preceding vowel a sound that is neither long nor short. | karne | forne |
| 5. The first vowel is usually long and the second silent in the digraphs <u>ai</u> , <u>ea</u> , <u>or</u> , and <u>ui</u> . | leam | jaip |
| 6. When the letters <u>ca</u> are together in a word, <u>o</u> always gives its long sound and the <u>a</u> is silent. | soaf | doak |
| 7. When <u>ea</u> come together in a word, the first letter is long and the second is silent. | kead | speal |
| 8. Words having double <u>e</u> usually have the long <u>e</u> sound. | jeek | deen |
| 9. When words end with silent <u>e</u> , the preceding <u>a</u> or <u>i</u> is long. | bine | sate |
| 10. In <u>ay</u> the <u>y</u> is silent and gives <u>a</u> its long sound. | tay | spay |
| 11. When the letter <u>i</u> is followed by the letters <u>gh</u> , the <u>i</u> usually stands for its long sound and the <u>gh</u> is silent. | trigh | digh |
| 12. The two letters <u>ow</u> make the long <u>o</u> sound. | fown | jown |
| 13. When <u>y</u> is the final letter in a word, it usually has a vowel sound. | bry | dery |

- | | | | |
|-----|---|-------|--------|
| 14. | When <u>a</u> is followed by <u>r</u> and final <u>e</u> , we expect to hear the sound heard in <u>care</u> . | sare | nare |
| 15. | When <u>c</u> and <u>h</u> are next to each other, they make only one sound. | chan | ratch |
| 16. | When <u>c</u> is followed by <u>or</u> or <u>a</u> the sound of <u>k</u> is likely to be heard. | cun | carm |
| 17. | When <u>c</u> is followed by <u>e</u> or <u>i</u> , the sound of <u>s</u> is likely to be heard. | cils | tace |
| 18. | The letter <u>g</u> often has a sound similar to that of <u>J</u> in <u>jump</u> when it precedes the letter <u>i</u> or <u>e</u> . | gemen | algin |
| 19. | When <u>ght</u> is seen in a word, <u>gh</u> is silent. | raght | hight |
| 20. | When a word begins <u>Kn</u> , the <u>K</u> is silent. | knor | knat |
| 21. | When a word begins with <u>wr</u> , the <u>w</u> is silent. | wrut | wran |
| 22. | When two consonants are side by side, only one is heard. | kally | canny |
| 23. | When a word ends in <u>ck</u> , it has the same last sound as in <u>look</u> . | mook | rick |
| 24. | In most two-syllable words, the first syllable is accented. | casus | ramun |
| 25. | If <u>a</u> , <u>in</u> , <u>re</u> , <u>ex</u> , <u>de</u> , or <u>be</u> , is the first syllable in a word, it is usually unaccented. | arong | insang |
| 26. | In most two-syllable words that end in a consonant followed by <u>y</u> , the first syllable is accented and the last is unaccented. | hoby | ramby |
| 27. | When <u>y</u> or <u>ey</u> is seen in the last syllable that is not accented, the long sound of <u>e</u> is heard. | masy | firsy |

28. When ture is the final syllable
in a word, it is unaccented.

racture hasture

29. When tion is the final syllable
in a word, it is unaccented.

dotion hemtion

TEST OF
SPELLED SYLLABLES
Words Correct

52
48
44
50
45
40
39
38
44
40
41
36
27
25
28
39
36
27
26
14
16
10
11
11

APPENDIX B

COLLECTED DATA

COLLECTED DATA
FOR
TOTAL GROUP

GATES MACGINITIE READING TEST		TEST OF NONSENSE SYLLABLES	
	Grade Level		Words Correct
1.	7.1		52
2.	7.0		44
3.	6.5		49
4.	6.5		50
5.	6.1		45
6.	6.1		40
7.	5.9		39
8.	5.9		39
9.	5.9		48
10.	5.7		41
11.	4.3		11
12.	3.7		30
13.	3.6		27
14.	3.5		20
15.	3.5		28
16.	3.4		38
17.	3.4		36
18.	3.3		27
19.	3.3		24
20.	3.2		1
21.	3.1		14
22.	2.9		6
23.	2.8		0
24.	2.7		19
25.	2.4		22
26.	2.4		6
27.	2.4		1
28.	2.3		11
29.	2.0		13
30.	1.8		24
	1.5		
Average	4.06	Average	27

BOYS

GATES MACGINITIE READING TEST

TEST OF
NONSENSE SYLLABLES

Grade Level

Words Correct

1.	7.1	52
2.	6.5	49
3.	6.1	40
4.	5.9	48
5.	5.9	47
6.	3.7	30
7.	3.4	38
8.	3.3	27
9.	3.2	1
10.	3.1	14
11.	2.4	22
12.	2.4	6
13.	2.0	11
14.	1.8	13
15.	1.5	24
Average	3.8	Average 28

GIRLS

GATES MACGINITIE READING TEST

TEST OF
NONSENSE SYLLABLES

Grade Level

Words Correct

1.	7.0+	44
2.	6.5	45
3.	6.1	45
4.	5.9	48
5.	5.7	41
6.	4.3	11
7.	3.6	27
8.	3.5	28
9.	3.4	36
10.	3.5	20
11.	3.3	24
12.	2.8	0
13.	2.7	19
14.	2.3	1
15.	2.9	6
Average	4.2	Average 22