

1952

# Analysis of mental imagery of third grade children (in contrast to their comprehension of the same stories)

---

<https://hdl.handle.net/2144/23067>

*"Downloaded from OpenBU. Boston University's institutional repository."*

Ed.  
Thesis  
Wagner, M. E.  
1952

stored

BOSTON UNIVERSITY  
SCHOOL OF EDUCATION

Thesis

Analysis of Mental Imagery of  
Third Grade Children  
(In Contrast to Their Comprehension  
of The Same Stories)

Submitted by

Mary Ellen Wagner

(A.B., Boston University, 1949)

In partial fulfillment of requirements for  
the degree of Master of Education

1952

Boston University  
School of Education  
Library

First Reader: Dr. Donald D. Durrell  
Professor of Education

Second Reader: Dr. Helen A. Murphy  
Professor of Education

## ACKNOWLEDGMENTS

The writer is deeply indebted and grateful to Dr. Donald D. Durrell, Professor of Education at Boston University, for the inspiration, enthusiasm, and encouragement he gave during this experiment.

Grateful acknowledgment is also due to the boys and girls who cooperated so willingly and cheerfully in helping make this study possible.

## TABLE OF CONTENTS

CHAPTER		PAGE
I	INTRODUCTION AND STATEMENT OF THE PROBLEM	2
II	PLAN OF EXPERIMENT	4
	Description of School Population	5
	Materials Used	7
	Approach	20
	Test Procedure	23
	Scoring	24
III	DESCRIPTION AND ANALYSIS OF DATA	30
IV	SUMMARY AND CONCLUSIONS	60
	Summary	61
	Limitations	63
	Conclusions	64
V	SUGGESTIONS FOR FURTHER RESEARCH	66
	BIBLIOGRAPHY	68
	APPENDIX	70

## LIST OF TABLES

TABLE		PAGE
I	Distribution According to Sex and Chronological Ages of the Forty Pupils in this Study . . . . .	6
II	Comprehension Test Scores . . . . .	26
III	Imagery Test Scores . . . . .	28
IV	Tabulation of Total Comprehension. and Total Imagery Scores . . . . .	32
V	Distribution of Total Imagery Scores of the Forty Pupils in this Study . . . . .	34
VI	Distribution of Total Comprehension Scores of the Forty Pupils in this Study . . . . .	37
VII	Correlation between Total Mental Imagery Scores and Total Comprehen- sion Scores . . . . .	40
VIII	Distribution of Total Imagery Scores According to Sex . . . . .	42
IX	Differences in Mental Imagery Scores of Boys and Girls . . . . .	44

TABLE		PAGE
X	Distribution of Total Comprehension Scores According to Sex . . . . .	47
XI	Differences in Reading Comprehension Scores of Boys and Girls . . . . .	49
XII	Colored Imagery vs. Black and White Imagery . . . . .	52
XIII	Moving Imagery vs. Still Imagery . .	55
XIV	Clear Imagery vs. Blurred Imagery . .	58

CHAPTER I

INTRODUCTION AND STATEMENT OF PROBLEM

## CHAPTER I

### INTRODUCTION AND STATEMENT OF THE PROBLEM

The purpose of this study was to determine the relationship of mental imagery to reading comprehension of third grade children. The paragraphs used for the imagery study were taken from the stories tested for reading comprehension.

Throughout this study, mental imagery shall be considered to be an image which a child reports after hearing the paragraphs read to him by the examiner. During the testing period there is an opportunity for the child to report the images he perceives, whether it be of a visual, auditory, gustatory, olfactory, or kinaesthetic nature.

An effort will be made to answer, as well as the available data will permit, the following questions:

1. What relationship, if any, exists between mental imagery and reading comprehension?
2. Do boys and girls have equal imagery?
3. Did the boys and girls used in this experiment have equal reading comprehension of the selected stories?
4. Did a child reveal an equal amount of imagery in all of the paragraphs?

5. If a child has a colored image of the first paragraph, does it follow that he have colored imagery of each of the subsequent paragraphs?
6. If a child has a moving image of the first paragraph, does it follow that he have moving imagery of each of the subsequent paragraphs?
7. If a child has a clear image of the first paragraphs, does it follow that he have clear imagery of each of the subsequent paragraphs?

CHAPTER II

PLAN OF EXPERIMENT

CHAPTER II  
PLAN OF EXPERIMENT

This chapter will be a discussion of the plan of the experiment for testing children's imagery of stories which they have previously read in contrast to their comprehension of the same stories.

Description of School Population

The subjects used in this experiment were forty boys and girls of one third-grade classroom in Burlington, Massachusetts. The population of this town is 3,612.

Heretofore, Burlington has been primarily a farming district, but now it is gradually changing to a small residential community with a country atmosphere.

The families represented by this group of children are of many types. The occupations of their fathers vary from optician to farmer and from design draftsman to the unemployed.

Distribution according to sex and chronological ages are shown in Table I, as follows:

TABLE I  
 DISTRIBUTION ACCORDING TO SEX AND CHRONOLOGICAL  
 AGES OF THE FORTY PUPILS IN THIS STUDY

	No.	7-10	8-2	8-3	8-4	8-5	8-6	8-7	8-8	8-9	8-10	8-11	9-0	9-1	9-2	9-3	9-4	9-10	10-1
Girls	25	1	2	3	2	2	3	2	1	1	1	2	1			1	2		1
Boys	15				2		1		1	1	1	3	1	1	1	1	1	1	

Mean C.A.      Girls      8-7  
 Boys      8-11

### Materials Used

Stories. Five stories from the Scott, Foresman, and Company third grade basal reader<sup>1/</sup> were selected for use in this experiment.

Story A, "Susan's Birthday Picnic,"<sup>2/</sup> told the reader about the Hall family's trip to the country. They wanted to find a suitable location for a picnic to celebrate Susan's birthday. All the places they found were not available for use as a picnic ground. Father decided to surprise the children. He asked them to close their eyes while he drove to a perfect place. When they arrived, they saw a sign that said "Picnics Here." Much to their astonishment they discovered they were in the park at the end of their own street.

"The Big, Long Honk,"<sup>3/</sup> Story B, was the story about a little boy who liked to honk the horn of a car. One day Father drove the children to the store. As soon as Father left the car, Tommy honked the horn. It got stuck. John climbed into the front seat to try to stop it, but he was unable to do so. A policeman

---

<sup>1/</sup> Gray, William S. and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company. Chicago, 1946 - 1947 edition.

<sup>2/</sup> Ibid, pp. 15 - 22.

<sup>3/</sup> Ibid, pp. 23 - 29.

came to see what was the matter. Father came running out of the store and tried to fix the horn. Because he was unable to do it, a man from a nearby filling station came over and stopped the honking. Father was very happy because the awful noise had stopped. Tommy was happy because he had had a big, long honk at last.

Story C, "A Wish That Came True,"<sup>1/</sup> was the story of how the Burns children were able to go to the circus. Every day they had looked at the circus sign. Because they could not afford to see the circus, they were planning only to see the parade. One day they saw a big truck stuck in the sand in front of their farm. Elephants were trying to pull it out, and the children became very excited. Mother asked the circus men to stay for supper. After the meal Buzz, the clown, did some tricks for the children. He found money in mother's hair and behind father's ear and circus tickets under each child's nose. Therefore, the Burns would be able to see the circus after all.

"Fluffytail and The Peanut Hunt,"<sup>2/</sup> Story D, told the children about a little squirrel, Fluffytail, who almost spoiled a birthday party. Fluffytail had seen

---

<sup>1/</sup> Ibid, pp. 68 - 76

<sup>2/</sup> Ibid, pp. 195 - 201.

Bill hiding peanuts all around the yard. He did not dare to go down to get them because Skipper, Bill's dog, was in the yard. As soon as Bill and Skipper left, Fluffytail hurried to find the peanuts. He ate as many as he could and hid the rest. At the surprise party that afternoon the children looked for the nuts, but they couldn't find many. When they heard Fluffytail chattering, they realized what had happened. Bill got some more nuts and hid them. Skipper made Fluffytail stay up in the tree until the peanut hunt was over. Then they gave a prize to Fluffytail of all the nuts they had found.

Story E, "Chip, the Baby Chipmunk,"<sup>1/</sup> told its young readers about a little chipmunk who got into trouble because he did not mind what his mother had told him about people. One day Chip came out of his home under a log because he smelled food. Bill saw Chip, who then scampered away. Bill decided to try to tame Chip by putting bits of food near the log. When he left, Chip came out to get the food. In two days he even dared to get on the table for food. His mother had warned him against such actions, but he was not influenced by this. Bill decided to make a trap to

---

<sup>1/</sup> Ibid, pp. 202 - 210.

catch Chip. This trap was successful and Chip was kept a prisoner for the whole day. That night Chip started gnawing on the box which was his prison. His mother started to do the same thing on the outside. Bill heard the noise and decided to let Chip go free because he was actually an animal of the woods and not of the home.

These five stories were selected for the following reasons:

1. interesting content.
2. country atmosphere in four of the stories.
3. low third-grade vocabulary.
4. commonplace events to country children.
5. vivid.

Comprehension Tests. There was a comprehension test built for each of the stories read by the children. Three types of questions were included: multiple choice, sequence of events, and matching items. These types of questions were used because the children would not be expected to write answers. All they had to do was to underline the right answer or to put the number of the correct answer on the test paper. A total of twenty-five questions were asked for each of the five tests.

Paragraphs. Two paragraphs from each of the five stories were selected as the passages to be read by the examiner. These paragraphs were to be the basis of the imagery study. They were selected for the following reasons:

1. interest to children
2. very little description
3. very few color words
4. vivid
5. country atmosphere

Questions Pertaining to Paragraphs. Twenty-five questions were asked of the children about each of the ten imagery passages. This was done in an effort to find out as much as possible about the children's images.

A general plan was carried out in the building of these questions. For each paragraph the following types of questions were asked.

Questions 1 - 6 General questions concerning the five senses.

Questions 7 - 18 Specific questions concerning images created by the reading of the paragraph.

Questions 19- 24 General information questions.

Question 25 Anything additional which the child had forgotten to report previously.

In questions 1 - 6 the children were given a free hand in expressing in their own words what they had perceived.

Questions 7 -18 were questions from which the examiner hoped to gather the information which the children had not reported in answer to the general questions.

Questions 19 - 24 were general information questions which would enable the examiner to ascertain those children who had colored, moving, and clear imagery. Also the examiner might find out which of the children had remembered seeing previously the place reported, if the children were themselves in the picture, and if any change had taken place in the picture as it was discussed.

Question 25 gave the children an opportunity to report anything which they had previously omitted.

These questions were asked orally by the examiner. The children's responses were written on the test sheet by the examiner. Therefore, the children's ability to read, write, and spell would not interfere with their responses.

Below are the materials used for Story A. The rest of the material may be found in the Appendix.<sup>1/</sup>

STORY A<sup>2/</sup>

Comprehension Test

"Susan's Birthday Picnic"

Directions: Draw a line under the right ending for each of the following sentences.

1. Susan got so many presents because
  - a. it was Christmas.
  - b. it was her birthday.
  - c. it was Easter.
  
2. The Hall family decided to have a picnic
  - a. in the country.
  - b. in the city.
  - c. in the park.
  
3. Mr. Hall knew a place where there was a pond. The Hall family wanted to go there so
  - a. they could go swimming.
  - b. Tommy could sail his boat.
  - c. Susan could ride in a boat.

---

<sup>1/</sup> See Appendix, pp. 72-94.

<sup>2/</sup> Gray, William S., and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company, Chicago, 1946 - 1947 edition, pp. 15 - 22.

4. The Hall family knew that they could not go down the street near the filling station because
  - a. a man told them not to go there.
  - b. the car broke down.
  - c. there was a "detour" sign.
5. They could not have a picnic in the maple grove because
  - a. it was not a pretty place.
  - b. there was a sign on one of the trees.
  - c. there was not a pond where Tommy could sail his boat.
6. Mr. Hall drove for a long time because
  - a. they liked to ride in the country.
  - b. they wanted to ride in their picnic.
  - c. they couldn't find a place for their picnic.
7. Father told the children to shut their eyes so that they would not
  - a. guess where the surprise place was.
  - b. ask so many questions.
  - c. tell him where to drive.
8. In the surprise place they found
  - a. maple trees, a bridge, and wild roses.
  - b. horses, cows, and a little calf.
  - c. trees, green grass, and a pond.

9. At the surprise place there was a sign which said
- a. NO PICNICS HERE.
  - b. PICNICS HERE.
  - c. PARK HERE.
10. The Hall family finally had their picnic
- a. in the country.
  - b. in the city.
  - c. in the park.

Directions: Read the five following sentences. Choose the sentence which tells what happened first in the story. Write 1 in the ( ) at the left. Then decide what happened second, third, fourth, and fifth in the story. Write 2, 3, 4, and 5 in the proper ( ).

- ( ) The Hall family found a perfect place where they had their picnic.
- ( ) A "Detour" sign changed their plans.
- ( ) Father told the children to close their eyes while he drove to a surprise place.
- ( ) The Hall family started off on their trip.
- ( ) A sign on a tree said that picnics could not be held there.

Imagery Paragraph 1

"I know just the place for Susan's birthday picnic," said Father. "It's in a beautiful forest. And there is a pond where Tommy can sail his boat."<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you? What?
5. Did you smell anything? What?
6. Did you taste anything? What?
7. Were there any people in your picture? How many?
8. How old were the people?
9. What were they wearing?
- 10: Where were the people?
11. What were they doing?
12. What time of the day was it?

---

<sup>1/</sup> Gray, William S. and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company. Chicago, 1946 - 1947 edition, p. 16.

13. What season of the year was it?
14. What kind of a day was it?
15. Did you see a pond? Tell me all about it.
16. Did you see any trees? Tell me all about them.
17. Was there a beach in your picture? Tell me about it.
18. Was there a boat in your picture? Tell me what kind it was.
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

Imagery Paragraph 2

All at once John shouted, "See that tall building over there! Isn't that the Park Street Building? Why, look! We are in the park at the end of our own street!"<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you?      What?
5. Did you smell anything?      What?
6. Did you taste anything?      What?
7. Were there any people in your picture?      How many?
8. Tell me how they looked.
9. About how old were they?
10. How were they dressed?
11. What were the people doing?
12. Did you hear any noises?      What?

---

<sup>1/</sup> Gray, William S. and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company. Chicago, 1946 - 1947 edition, p. 22.

13. Was there anything in the street? What?
14. Were the cars moving? Did you hear them move?
15. Did you see any buildings? Were they clear?
16. Were the buildings tall? Tell me about them.
17. Were the buildings far away? About how far?
18. How did the park look in your picture?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it?
25. Can you tell me anything else about your picture? What?

### Approach

Because the boys and girls knew that their teacher had been studying at Boston University, they were very anxious to find out about her lessons and homework. This simplified the task of telling them about the tests she wished to administer. They were told that she was trying to learn whether or not the children in her classroom had pictures in their minds as they read their stories each day.

They all wished to know how they could help in her work. The teacher told them that she would invite each one individually to stay in the classroom while the children were having recess. She explained that it would be necessary for some of them to miss a few play times and for those who walked to school to come a little earlier. This was readily agreed to by the forty children.

The teacher requested the children to close their eyes while she read a sentence to them. Questions concerning their images were then asked. In this way the children were acquainted with the testing procedure.

Below is the sample sentence used.

A little girl sat on the steps waiting for her father to come home from work.

The sample questions asked are as follows.

1. Did you have a picture in your mind as I read this sentence to you?
2. Tell me all that you saw as I read this sentence to you.
3. Tell me all that you heard as I read this sentence to you.
4. Did you feel anything?      What?
5. Did you taste anything?     What?
6. Did you smell anything?     What?
7. Did you see the girl?      Tell me all that you can about her.
8. What was the little girl doing?
9. What was she wearing?
10. What did you see near her?
11. What kind of steps were they?
12. What time of day was it?
13. What kind of a day was it?
14. What season of the year was it?
15. Was there anyone else in the picture?   Who?
16. What were they wearing?
17. What were they doing?
18. Did you see a yard?      Tell me all about it.
19. Was your picture a clear or a blurred one?

20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

The first question was asked of the class. A show of hands revealed that all but four children did have a picture in their minds. Then the other questions were asked of Girl #1.

Her answers brought forth bewildered looks on the faces of many in the class. The children, when asked why they looked so upset, replied that they had not seen what Girl #1 had seen. They were assured that their answers were correct although they were different. It was then explained that the teacher wished to know what they had actually pictured. The children were pleased by this explanation because they realized that they were not expected to have set answers for any of the questions.

Then Sample Sentence 2<sup>1/</sup> was read, and the questions were asked of Boy #1 in a similar manner.

### Test Procedure

Reading Stories. Each of the five stories were read orally in a small group situation.

Comprehension Tests. After each group had read a selection, they were given a comprehension test concerning it. The directions for these tests were read orally by the examiner.

Imagery Paragraph and Questions. Before the teacher read the first paragraph to each child, she tried to explain exactly what was expected of him.

He was to tell all that he had seen, heard, felt, smelled, and tasted as she read the paragraph to him. She cautioned that if he did not see anything, he was just as correct as if he had seen many things. Throughout the testing period this fact was reiterated because the examiner did not wish the child to answer a question untruthfully.

The child was then asked to close his eyes while he listened carefully to the paragraph. The examiner read Paragraph 1 to him. He was then asked the twenty-five questions concerning his imagery. His answers

---

<sup>1/</sup> See Appendix, p. 70.

were recorded on the test paper by the examiner. The examiner continued with the other paragraphs and sets of questions.

If a child acted tired or otherwise non-responsive during the testing period, the examiner would not continue after a set of questions had been finished. Under no circumstances were any of the children tested for more than fifteen minutes in one sitting. It was felt that a child could not concentrate upon his images for a greater period of time without seriously affecting his score.

### Scoring

Comprehension Tests. The multiple-choice items in the five tests were scored by use of the correction formula.

The sequence items in each test were scored according to the Sims Method.<sup>1/</sup> The following chart will show the point value for this section of the tests.

---

<sup>1/</sup> Sims, Verner M., "Note on Scoring the Rearrangement Test," Journal of Educational Psychology. 28:302-304, April, 1937.

<u>Deviation</u>	<u>Score</u>
8	0
6	1
4	3
2	4
0	5

The matching questions were scored with a one-point value for each item answered correctly.

After all five tests had been scored, the results were recorded as is shown in Table II.

TABLE II  
COMPREHENSION TEST SCORES

Story						
Girls	A	B	C	D	E	Total
1	13.5	14.5	8.0	11.5	5.5	53.0
2	8.0	10.0	11.5	6.5	13.0	49.0
3	12.0	15.0	13.5	13.5	15.0	69.0
4	15.0	15.0	14.0	15.0	15.0	74.0
5	13.5	12.5	15.0	8.5	13.5	63.0
6	2.0	6.0	1.0	2.0	2.5	13.5
7	8.5	9.0	13.0	8.5	10.0	49.0
8	5.5	8.0	5.0	8.0	4.0	30.5
9	12.5	11.5	13.0	9.5	9.5	56.0
10	10.0	7.5	4.0	8.5	9.5	39.5
11	9.5	10.0	7.0	2.5	2.5	31.5
12	7.0	4.0	0.0	4.0	7.0	22.0
13	6.5	8.0	2.5	11.5	9.5	38.0
14	5.5	11.5	7.0	4.0	8.5	36.5
15	8.0	2.0	1.0	0.0	0.0	11.0
16	7.0	3.0	2.5	2.5	4.0	19.0
17	7.0	4.5	4.0	0.0	3.5	19.0
18	13.5	12.5	15.0	13.5	13.5	68.0
19	13.5	13.5	8.5	7.0	8.5	51.0
20	10.5	7.5	14.0	7.0	5.5	44.5
21	13.5	15.0	12.5	8.0	13.5	62.5
22	12.5	12.5	13.5	11.5	9.5	59.5
23	1.0	1.5	0.0	0.0	0.0	2.5
24	5.5	4.5	2.0	1.0	0.0	13.0
25	10.0	1.0	1.0	1.0	4.0	17.0
Boys						
1	8.0	13.0	12.0	9.5	13.5	56.0
2	9.0	3.0	7.0	2.5	5.5	27.0
3	11.0	4.5	7.0	2.5	10.0	35.0
4	10.00	4.5	10.0	7.0	7.0	38.5
5	4.0	10.5	2.5	8.5	8.5	34.0
6	5.5	2.0	0.0	8.0	5.5	21.0
7	13.5	14.0	13.5	15.0	13.5	69.5
8	8.0	2.5	5.0	2.5	5.5	23.5
9	1.0	5.0	4.0	5.5	0.0	15.5
10	2.5	0.5	2.5	1.0	0.0	6.5
11	8.5	12.0	13.0	8.5	11.0	53.0
12	5.5	2.0	2.5	0.0	4.0	14.0
13	10.5	4.5	10.0	11.5	11.0	47.5
14	11.5	3.0	5.5	9.5	8.5	38.0
15	5.0	4.0	4.0	4.0	5.0	22.0

Imagery Tests. Considerable attention was given to the scoring of the imagery questions. It was thought at first that a child should receive double credit for all he reported without specific questioning. That is, all he reported in answer to questions 2, 3, 4, 5, and 6 should be worthy of double credit in comparison to his answers to specific questions, as those of numbers 7 - 18. This method was considered unwise, since an image was thought to be the same whether the child reported it in answer to general or specific questioning.

Therefore, one point was given for each object that a child reported. One point was also given for each action reported. In addition, a one-point value was assigned to each modifying term concerning objects and actions. Questions which were answered by yes or no were not given any credit.

A sample of this scoring may be found in the Appendix.<sup>1/</sup>

After each test had been scored, the totals were recorded as is shown in Table III.

---

<sup>1/</sup> See Appendix, p. 100.

TABLE III  
IMAGERY TEST SCORES

Girls	Paragraph										Total
	1	2	3	4	5	6	7	8	9	10	
1	15	43	21	12	31	26	46	13	11	13	231
2	10	34	14	20	18	35	23	18	9	17	198
3	36	41	52	38	47	29	54	17	25	43	382
4	9	17	11	24	12	42	21	41	51	34	262
5	27	33	39	23	45	39	43	44	35	23	351
6	49	39	24	27	19	24	23	25	17	17	264
7	17	26	23	29	16	18	10	9	31	25	204
8	3	34	77	76	28	35	41	37	42	28	401
9	48	59	42	26	51	45	28	33	36	12	380
10	24	8	17	13	26	21	25	34	5	16	189
11	25	34	28	35	46	52	21	14	38	54	347
12	38	47	31	24	28	21	27	28	15	18	277
13	8	50	76	44	62	29	38	49	48	28	432
14	48	15	36	24	32	25	27	38	29	21	295
15	40	44	34	29	14	26	21	26	16	18	268
16	21	15	26	30	2	18	21	2	18	17	170
17	7	3	17	9	5	5	3	10	4	8	71
18	41	31	47	54	50	26	29	37	8	13	336
19	23	13	9	19	16	6	19	43	25	11	184
20	18	31	25	62	18	36	36	17	35	7	285
21	26	14	16	13	20	11	16	17	9	10	152
22	14	4	3	15	13	5	5	6	3	3	71
23	21	11	22	24	23	18	18	11	32	17	197
24	16	21	14	38	32	14	18	17	6	9	185
25	25	18	37	30	26	22	44	43	16	8	269
Boys											
1	74	69	53	67	58	72	67	38	52	69	619
2	42	79	107	77	56	31	38	66	49	40	585
3	33	7	16	7	5	20	24	26	17	17	172
4	62	81	78	34	35	24	34	22	71	26	467
5	62	67	39	24	67	49	38	38	18	33	435
6	29	4	38	20	29	33	28	30	7	21	239
7	18	17	10	25	34	26	17	48	14	12	221
8	54	54	28	34	29	26	36	37	15	14	327
9	12	3	4	10	3	10	11	11	4	9	77
10	32	14	30	21	15	19	21	31	12	16	211
11	24	12	24	26	18	28	27	27	22	24	232
12	19	10	4	5	12	8	31	8	13	27	137
13	38	23	47	32	53	25	35	63	18	23	357
14	47	52	44	22	15	28	22	28	33	26	317
15	3	34	43	32	3	43	25	41	14	26	264

CHAPTER III

DESCRIPTION AND ANALYSIS OF DATA

CHAPTER III  
DESCRIPTION AND ANALYSIS OF DATA

This chapter will be a description and analysis of the data derived from the study of mental imagery of third-grade children.

It was deemed necessary to determine the level at which a difference could be considered significant. Therefore, a critical ratio of 3.0 or better was made to be significant. With a critical ratio of 3.0, the chances are 369 to 1 of a true difference.<sup>1/</sup>

A meaningful correlation was considered to be a correlation of .50 or above.

---

<sup>1/</sup> Kvaraceus, W. C., "Methods in Educational Research," Course Outline and Study Guide, Boston University, 1949. P. 77.

## TABLE IV

Table IV is a tabulation of the total imagery scores, the total comprehension scores, and the chronological ages of the forty pupils used in this study.

TABLE IV  
 TABULATION OF TOTAL COMPREHENSION  
 AND TOTAL IMAGERY SCORES

Girls	Chronological Age	Total Comprehension Scores	Total Imagery Scores
1	8-5	53.0	231
2	8-10	49.0	198
3	8-4	69.0	382
4	8-9	74.0	262
5	8-7	63.0	351
6	9-3	13.5	264
7	8-2	49.0	204
8	8-11	30.5	401
9	8-6	56.0	380
10	8-6	39.5	189
11	7-10	31.5	347
12	9-4	22.0	277
13	9-4	38.0	432
14	8-6	36.5	295
15	8-11	11.0	268
16	8-2	19.0	170
17	10-1	19.0	71
18	8-4	68.0	336
19	8-3	51.0	184
20	8-5	44.5	285
21	8-3	62.5	152
22	8-7	59.5	71
23	9-0	2.5	197
24	8-8	13.0	185
25	8-3	17.0	269
Boys			
1	9-10	56.0	619
2	9-1	27.0	585
3	8-11	35.0	172
4	8-8	38.5	467
5	8-9	34.0	435
6	8-10	21.0	239
7	9-2	69.5	221
8	9-0	23.5	327
9	8-11	15.5	77
10	8-11	6.5	211
11	8-4	53.0	232
12	9-3	14.0	137
13	8-6	47.5	357
14	8-4	38.0	317
15	9-4	22.0	264

## TABLE V

Table V shows the distribution of the total mental imagery scores of the forty pupils in the study.

TABLE V  
 DISTRIBUTION OF TOTAL IMAGERY SCORES  
 OF THE FORTY PUPILS IN THIS STUDY

Score	
600-649	1
550-599	1
500-549	
450-499	1
400-449	3
350-399	4
300-349	4
250-299	8
200-249	6
150-199	8
100-149	1
50-99	3
N	40

<u>Grade</u>	<u>No.</u>	<u>Mean</u>	$\frac{Q_3 - Q_1}{2}$	<u>Range</u>
3	40	276.25	81.375	542

The data in Table V show the individual differences in mental imagery. The frequencies of the scores are given. The mean score is 276.25. The range is from 71 to 619. The quartile deviation is 81.375.

## TABLE VI

Table VI shows the distribution of the total comprehension scores of the forty pupils in this study.

TABLE VI  
 DISTRIBUTION OF TOTAL COMPREHENSION  
 SCORES OF THE FORTY PUPILS IN THIS STUDY

Score	
73-77	1
68-72	3
63-67	2
58-62	1
53-57	4
48-52	4
43-47	1
38-42	4
33-37	3
28-32	2
23-27	2
18-22	5
13-17	5
8-12	1
3-7	2
N	40

<u>Grade</u>	<u>No.</u>	<u>Mean</u>	$\frac{Q_3 - Q_1}{2}$	<u>Range</u>
3	40	38.25	17.025	72.5

The data in Table VI show the individual differences in reading comprehension. The frequencies of the scores are given. The mean score is 38.25. The range is from 2.5 to 74.0. The quartile deviation is 17.025.

## TABLE VII

Table VII shows the correlation of the total mental imagery scores and the total reading comprehension scores of the forty pupils used in this study.



## TABLE VIII

Table VIII shows the distribution of the total mental imagery scores of the forty pupils in this study according to sex.

TABLE VIII  
 DISTRIBUTION OF TOTAL IMAGERY  
 SCORES ACCORDING TO SEX

Scores	Boys	Girls
600-649	1	
550-599	1	
500-549		
450-499	1	
400-449	1	2
350-399	1	3
300-349	2	2
250-299	1	7
200-249	4	2
150-199	1	7
100-149	1	
50-99	1	2
N	15	25

	<u>No.</u>	<u>Mean</u>	$\frac{Q_3 - Q_1}{2}$	<u>Range</u>
Boys	15	311.50	101.5625	542
Girls	25	273.00	94.1875	361

## TABLE IX

Table IX shows the sex differences in the mental imagery scores of the forty pupils used in this study.

TABLE IX  
DIFFERENCES IN MENTAL IMAGERY  
SCORES OF BOYS AND GIRLS

Groups	Boys	Girls
No.	15	25
Mean	311.50	273.00
S.D.	153.50	97.50
S.E.m	41.03	19.90
Diff.		38.50
S.E. Diff.		24.58
Critical Ratio		1.57

The data in Table IX show that the boys made higher scores than the girls in mental imagery. The mean score of the boys, 311.5, was higher than the mean score of the girls, 273.0. The critical ratio of 1.57 is not significant.

## TABLE X

Table X shows the distribution of the total comprehension scores of the forty pupils in this study according to sex.

TABLE X  
 DISTRIBUTION OF TOTAL COMPREHENSION  
 SCORES ACCORDING TO SEX

Scores	Boys	Girls
73-77		1
68-72	1	2
63-67		2
58-62		1
53-57	2	2
48-52		3
43-47	1	1
38-42	2	2
33-37	2	1
28-32		2
23-27	2	1
18-22	2	2
13-17	2	3
8-12	1	1
3-7		1
N	15	25

	<u>No.</u>	<u>Mean</u>	$\frac{Q_3 - Q_1}{2}$	<u>Range</u>
Boys	15	34.2	12.1875	63.0
Girls	25	40.9	18.1250	71.5

## TABLE XI

Table XI shows the sex differences in the comprehension scores of the forty pupils used in this experiment.

TABLE XI  
DIFFERENCES IN READING COMPREHENSION  
SCORES OF BOYS AND GIRLS

Groups	Boys	Girls
No.	15	25
Mean	34.2	40.9
S.D.	16.8	19.6
S.E.m	4.49	4.00
Diff.		6.7
S.E. Diff.		6.09
Critical Ratio		1.10

The data in Table XI show that the girls made higher scores than the boys in reading comprehension. The mean score of the girls, 40.9, was higher than the mean score of the boys, 34.2. The critical ratio of 1.1 is not significant.

## TABLE XII

Table XII lists the children and records colored or black-and-white imagery for each of the ten imagery passages.

TABLE XII

COLORED IMAGERY VS. BLACK AND WHITE IMAGERY

Girls	Paragraph										Total	Total
	1	2	3	4	5	6	7	8	9	10	X's	-'s
1	—	X	X	—	—	—	X	—	X	—	4	6
2	X	X	X	—	X	X	X	X	X	X	9	1
3	X	—	—	—	—	X	X	X	X	X	5	5
4	—	X	X	X	X	X	X	X	X	X	9	1
5	X	X	X	X	X	X	X	X	X	X	10	0
6	X	X	X	X	X	X	X	X	X	X	10	0
7	X	—	X	X	X	X	X	X	X	X	9	1
8	X	X	X	X	X	X	X	X	X	X	10	0
9	X	X	X	X	X	X	X	X	X	X	10	0
10	X	X	X	—	—	—	X	X	X	—	6	4
11	X	X	X	X	X	X	—	—	—	—	6	4
12	X	X	X	X	X	X	X	X	X	X	10	0
13	X	X	X	X	X	X	X	X	X	X	10	0
14	X	X	X	X	X	X	X	X	X	X	10	0
15	X	X	X	X	X	X	X	X	X	X	10	0
16	X	X	X	X	X	X	X	X	X	X	10	0
17	X	—	X	—	—	X	X	—	X	X	6	4
18	X	X	X	X	X	X	X	X	—	X	9	1
19	X	X	X	—	X	X	X	X	X	X	9	1
20	X	X	X	X	—	X	—	—	X	—	6	4
21	—	—	X	—	—	—	—	—	—	—	1	9
22	X	X	X	—	X	—	—	X	—	X	6	4
23	X	—	X	X	—	X	X	—	X	X	7	3
24	X	X	X	X	X	X	X	X	X	X	10	0
25	X	—	X	X	X	—	X	X	X	—	7	3
Boys												
1	X	X	X	X	X	X	X	X	X	X	10	0
2	X	X	X	X	X	X	X	X	X	X	10	0
3	—	X	X	X	X	—	X	X	X	X	8	2
4	X	X	X	X	X	X	X	X	X	X	10	0
5	X	X	X	X	X	X	X	X	—	X	9	1
6	X	—	X	X	X	X	X	X	X	X	9	1
7	X	X	X	X	X	X	X	X	X	X	10	0
8	X	X	X	X	X	X	X	X	X	X	10	0
9	X	—	X	X	X	X	X	X	—	—	7	3
10	—	—	X	X	X	X	X	X	X	X	8	2
11	X	X	X	—	X	X	X	X	X	X	9	1
12	X	X	X	X	X	X	X	X	X	X	10	0
13	—	—	X	X	X	X	—	X	X	X	7	3
14	X	X	X	X	—	X	X	X	X	X	9	1
15	X	—	X	X	X	X	X	X	X	X	9	1
X	34	29	39	31	32	34	35	33	34	33		
—	6	11	1	9	8	6	5	7	6	7		

X : Colored Imagery  
 — : Black and White Imagery

Table XII may be read in the following manner:

Reading from left to right, Girl #1 had colored imagery in paragraphs 2, 3, 7, and 9. She had black and white imagery in paragraphs 1, 4, 5, 6, 8, and 10. The totals are given at the right.

Reading from top to bottom, thirty-four children had colored imagery and six had black and white imagery in paragraph 1.

The following data was obtained from Table XII:

NUMBER OF PARAGRAPHS IN WHICH COLORED IMAGERY WAS REPORTED		
No. of paragraphs	Boys	Girls
10	6	10
9	5	5
8	2	0
7	2	2
6	0	3
5	0	1
4	0	1
3	0	0
2	0	0
1	0	1
0	0	0

## TABLE XIII

Table XIII lists the children and records moving or still imagery for each of the ten imagery passages.

TABLE XIII  
MOVING IMAGERY VS. STILL IMAGERY

Girls	Paragraph										Total	Total
	1	2	3	4	5	6	7	8	9	10	x's	—'s
1	—	—	X	X	—	X	X	—	X	—	5	5
2	X	—	X	X	X	X	X	X	X	X	9	1
3	—	—	—	—	—	X	—	—	X	X	3	7
4	—	—	—	X	—	—	—	—	—	—	1	9
5	—	X	X	X	X	X	X	X	X	X	9	1
6	X	—	—	—	—	X	—	X	—	X	4	6
7	X	X	—	—	—	—	X	X	X	X	6	4
8	—	X	—	—	—	—	—	—	—	—	1	9
9	X	X	X	X	X	X	—	X	X	X	9	1
10	X	X	X	—	X	X	X	X	X	X	9	1
11	X	—	—	—	—	—	X	—	X	—	3	7
12	—	X	X	X	X	X	—	—	X	X	7	3
13	—	—	—	—	X	—	—	X	—	—	2	8
14	X	—	—	X	X	X	—	—	—	—	4	6
15	X	—	—	X	—	X	—	—	X	—	4	6
16	X	—	X	X	—	X	—	—	—	—	4	6
17	—	—	—	X	—	—	—	—	X	X	3	7
18	X	X	X	X	X	X	X	X	—	X	9	1
19	—	—	X	—	—	X	—	—	X	X	4	6
20	X	—	—	X	—	X	X	—	X	—	5	5
21	—	X	X	—	—	—	—	—	—	—	2	8
22	—	—	—	—	—	—	—	—	—	—	0	10
23	X	X	—	X	X	X	—	—	—	—	5	5
24	X	X	X	X	X	X	X	X	X	X	10	0
25	—	X	X	X	—	X	X	—	X	—	6	4
Boys												
1	X	—	X	X	X	X	X	X	X	X	9	1
2	—	—	—	X	X	X	—	X	—	X	5	5
3	X	X	X	X	X	—	X	X	X	X	9	1
4	X	X	X	X	X	X	X	X	X	X	10	0
5	X	X	X	X	X	X	—	X	X	X	9	1
6	—	—	X	X	X	X	X	X	X	X	8	2
7	—	X	X	X	X	—	X	X	—	X	7	3
8	X	X	X	X	X	X	X	X	X	X	10	0
9	—	—	—	X	X	—	—	X	—	—	3	7
10	X	X	—	X	—	—	—	X	X	X	6	4
11	—	X	X	X	—	X	X	—	—	X	6	4
12	—	—	X	—	—	—	X	X	X	X	5	5
13	X	X	—	—	—	X	X	—	X	—	5	5
14	—	X	—	—	X	X	—	—	—	X	3	7
15	—	X	—	X	—	—	—	X	X	X	5	5
X	20	21	21	27	20	26	19	21	26	24		
—	20	19	19	13	20	14	21	19	14	16		

X: Moving Imagery  
—: Still Imagery

Table XIII may be read in the following manner:

Reading from left to right, Girl #1 had moving imagery in paragraph 3, 4, 6, 7, and 9. She had still imagery in paragraphs 1, 2, 5, 8, and 10. The totals are given at the right.

Reading from top to bottom, twenty children had moving imagery and twenty had still imagery in paragraph 1.

The following data was obtained from Table XIII:

NUMBER OF PARAGRAPHS IN WHICH MOVING IMAGERY WAS REPORTED		
No. of paragraphs	Boys	Girls
10	2	1
9	3	5
8	1	0
7	1	1
6	2	2
5	4	3
4	0	5
3	2	3
2	0	2
1	0	2
0	0	1

## TABLE XIV

Table XIV lists the children and records clear or blurred imagery for each of the ten imagery passages.

TABLE XIV  
CLEAR IMAGERY VS. BLURRED IMAGERY

Girls	Paragraph										Total	Total
	1	2	3	4	5	6	7	8	9	10	x's	—'s
1	x	x	—	x	—	x	x	x	x	x	8	2
2	x	x	x	x	x	x	x	x	x	x	10	0
3	x	—	x	—	x	x	x	x	x	x	8	2
4	x	x	x	x	x	x	x	—	—	x	8	2
5	x	—	x	x	x	x	x	x	x	x	9	1
6	x	—	x	x	x	x	x	x	—	x	8	2
7	x	—	x	x	x	x	x	x	x	—	8	2
8	—	x	x	—	—	—	—	—	—	—	2	8
9	x	x	x	x	x	x	x	x	x	x	10	0
10	—	x	x	x	x	x	x	x	x	x	9	1
11	x	x	x	—	x	x	x	x	x	x	9	1
12	—	x	x	x	x	x	—	x	x	x	8	2
13	x	x	x	x	—	x	x	x	x	x	9	1
14	x	x	x	—	x	x	—	x	—	x	7	3
15	x	x	x	x	x	x	x	x	x	x	10	0
16	x	x	x	x	—	x	x	—	—	x	7	3
17	x	x	x	x	x	x	x	x	x	x	10	0
18	x	x	x	x	x	x	x	x	x	x	10	0
19	x	—	—	—	—	—	—	—	x	—	2	8
20	x	x	x	—	—	—	x	x	—	x	6	4
21	x	x	x	x	x	x	x	x	x	x	10	0
22	x	x	—	x	x	x	x	x	x	x	9	1
23	x	x	x	x	—	x	x	x	x	x	9	1
24	x	—	x	x	x	x	x	—	x	—	7	3
25	—	x	x	x	—	x	x	x	x	x	8	2
Boys												
1	x	x	x	—	x	x	x	—	x	x	8	2
2	x	x	x	x	x	x	x	x	x	x	10	0
3	x	—	x	—	x	x	x	x	x	x	8	2
4	x	x	x	x	x	x	x	x	x	x	10	0
5	x	x	x	—	x	x	x	x	x	x	9	1
6	—	x	x	x	x	x	—	x	—	x	7	3
7	—	x	x	x	x	x	x	x	x	x	9	1
8	x	x	x	x	x	x	x	x	x	x	10	0
9	x	x	x	x	x	x	x	x	—	x	9	1
10	x	x	x	x	x	x	x	x	x	x	10	0
11	x	x	x	x	x	x	x	x	x	x	10	0
12	—	—	—	—	—	—	—	—	x	x	2	8
13	—	x	x	x	x	x	x	—	—	x	7	3
14	x	—	x	x	x	x	x	x	x	x	9	1
15	x	x	x	x	—	x	x	x	x	x	9	1
X	32	31	36	30	30	36	34	32	31	36		
—	8	9	4	10	10	4	6	8	9	4		

x : Clear Imagery  
— : Blurred Imagery

Table XIV may be read in the following manner:

Reading from left to right, Girl #1 had clear imagery in paragraphs 1, 2, 4, 6, 7, 8, 9, and 10. She had blurred imagery in paragraphs 3 and 5. The totals are given at the right.

Reading from top to bottom, thirty-two children had clear imagery and eight had blurred imagery in Paragraph 1.

The following data was obtained from Table XIV:

NUMBER OF PARAGRAPHS IN WHICH CLEAR IMAGERY WAS REPORTED		
No. of paragraphs	Boys	Girls
10	5	6
9	5	6
8	2	7
7	2	3
6	0	1
5	0	0
4	0	0
3	0	0
2	1	2
1	0	0
0	0	0

CHAPTER IV

SUMMARY AND CONCLUSIONS

CHAPTER IV  
SUMMARY AND CONCLUSIONS

This chapter will summarize the experiment and its findings. The limitation of the study and conclusions concerning it will be discussed.

Summary

Forty boys and girls were tested for their mental imagery and reading comprehension of stories which were selected by the examiner. The data obtained from this study will answer the following questions which were posed in Chapter I.<sup>1/</sup>

1. What relationship, if any, exists between mental imagery and reading comprehension?

As is shown in Table VII, p. 40, a positive correlation of .20 was found between the mental imagery scores and the reading comprehension scores of the forty pupils used in this study. This correlation is not significant.

2. Do boys and girls have equal imagery?

The boys used in this experiment had higher scores on the imagery tests than the girls.<sup>2/</sup> The

---

<sup>1/</sup> See p. 2.

<sup>2/</sup> See Table IX, p. 44.

boys had a mean score of 311.50, and the girls, 273.00. The critical ratio between the boys and girls of 1.57 is not significant.

3. Did the boys and girls used in this experiment have equal reading comprehension of the selected stories?

The twenty-five girls used in this study had higher reading comprehension scores than the fifteen boys, as is shown in Table XI, p. 49. The girls had a mean score of 40.9, and the boys, 34.2. The critical ratio of 1.10 is not significant.

4. Did a child reveal an equal amount of imagery in all of the paragraphs?

A child did not reveal an equal amount of imagery in all of the paragraphs. As is shown in Table III, p. 28, the children varied widely in their mental imagery from paragraph to paragraph.

5. If a child has a colored image of the first paragraph, does it follow that he have colored imagery of each of the subsequent paragraphs?

Although a child may have colored imagery of the first paragraph, it does not follow that of each of the subsequent paragraphs he report colored imagery. Each child used in this experiment reported colored imagery in at least one instance, as is shown in Table XII, p. 52. Eleven children reported colored imagery in all of their images.

6. If a child has moving imagery of the first paragraph, does it follow that he have moving imagery of each of the subsequent paragraphs?

Although a child may have moving imagery of the first paragraph, it does not follow that of each of the subsequent paragraphs he report moving imagery. Each child reported moving imagery in at least one instance, as is shown in Table XIII, p.55. Three children reported moving imagery in all of their images.

7. If a child has a clear image of the first paragraph, does it follow that he have clear imagery of each of the subsequent paragraphs?

Although a child may have clear imagery of the first paragraph, it does not follow that of each of the subsequent paragraphs he report clear imagery. Each child reported clear imagery in at least one instance, as is shown in Table XIV, p. 58 . Sixteen children reported clear imagery in all of their images.

#### Limitations

The limitations of this experiment, which were noted by the examiner, are as follows.

1. The personal interview technique may not work as well with some children as others, depending upon their temperament and mood.

2. The method of recording answers to the questions pertaining to the imagery passages was a time-consuming factor.

3. Scoring of the imagery tests may vary with the scorer.

4. The selection of material might not prove valuable for other populations - city children.

5. The vocabulary of the material was too high for the slow readers in the class.

### Conclusions

All the children used in this experiment reported varying degrees of imagery of the ten paragraphs read to them.

The examiner feels that teaching a child to increase his imagery ability would be a valuable method of making stories more interesting and more meaningful to him.

CHAPTER V

SUGGESTIONS FOR FURTHER RESEARCH

CHAPTER V  
SUGGESTIONS FOR FUTURE RESEARCH

In view of the findings of this study and the observation of some of its limitations, the following suggestions are made for future research.

1. Improvement of technique for testing the imagery of children.
2. Improvement of the scoring of an imagery test.
3. Analysis of city children tested with the materials used in this experiment.
4. Construction of a reliability test of imagery.
5. Exercises written to aid in increasing the imagery of children.

BIBLIOGRAPHY

## BIBLIOGRAPHY

Gray, William S. and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company. Chicago, 1946 - 1947 edition. 319 pp.

Kvaraceus, W. C., "Methods in Educational Research," Course Outline and Study Guide, Boston University, 1949.

Sims, Verner M., "Note on Scoring The Rearrangement Test," Journal of Educational Psychology, 28: 302-304, April, 1937.

APPENDIX

Sample Sentence 2

The boy jumped over the fence.

Imagery Questions

1. Did you have a picture in your mind as I read this sentence to you?
2. Tell me all that you saw as I read this sentence to you.
3. Tell me all that you heard as I read this sentence to you.
4. Did you feel anything?      What?
5. Did you smell anything?      What?
6. Did you taste anything?      What?
7. Did you see the boy?      Tell me all that you can about him.
8. What was he doing?
9. What was he wearing?
10. Where was he?
11. About how old was he?
12. What kind of a fence was it?
13. What was on the other side of the fence?
14. Was there anyone else in the picture?      Who?
15. Tell me all you can about them.
16. What time of the day was it?

17. What kind of a day was it?
18. What season of the year was it?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

STORY E<sup>1/</sup>

Comprehension Test

"The Big, Long Honk"

Directions: Read the first sentence on the left side of the page. Then find a sentence on the right that means the same thing or almost the same thing. Put the correct number, 1, in the ( ) before the sentence. Do the other ones in the same way.

- |   |  |
|---|--|
| 1. I have an errand to do.  | ( ) John threw up his arms so that we knew he wasn't too near the wheel. |
| 2. He held up his hands to show that he wasn't touching the wheel.    | ( ) At that time a man ran from the gas station at the corner.           |
| 3. Soon there was a crowd of people on the walk beside the car.       | ( ) Hitting the wheel a little did not make the horn stop honking.       |
| 4. Father tried to stop the horn by giving the wheel a little tap.    | ( ) My mother sends me to the store to get bread.                        |
| 5. Just then a man came running from a filling station on the corner. | ( ) Father hit the horn another time to make it stop.                    |
|   | ( ) Many people stood on the sidewalk beside the automobile.             |

1/ Gray, William S., and Arbuthnot, May Hill, Streets and Roads. Scott, Foresman and Company, Chicago, 1946 - 1947 edition, pp. 23 - 29.

Directions: Draw a line under the right ending for the following sentences.

1. Tommy liked to honk the horn because
  - a. he knew that his family would be angry.
  - b. he liked to blow the horn.
  - c. he was a very noisy boy.
2. A car backed out in the street. Father let Tommy honk the horn so that
  - a. Tommy would not bother him again.
  - b. he could hear the horn.
  - c. the car would stop.
3. When Tommy's arm touched the horn, it would not stop honking because
  - a. it was stuck.
  - b. Tommy kept his arm on it.
  - c. the horn always honked a long time.
4. One man thought that John was honking the horn since
  - a. John was older than Tommy.
  - b. Tommy was laughing at John.
  - c. John had climbed into the driver's seat.
5. The policeman told the children to stop the honking because
  - a. a crowd was near the car.
  - b. the noise was awful.
  - c. the children were sitting in the car.

Directions: Read the five following sentences. Choose the sentence which tells what happened first in the story. Write 1 in the ( ) at the left. Then decide what happened second, third, fourth, and fifth in the story. Write 2, 3, 4, and 5 in the proper ( ).

- ( ) The horn got stuck.
- ( ) The man from the filling station fixed the horn.
- ( ) Father took the children for a ride in the car.
- ( ) Father went into the store.
- ( ) A policeman rushed over to the car.

Imagery Paragraph 3

A policeman with a silver star on his blue coat came hurrying through the crowd. He looked at Tommy and said in a gruff voice, "What do you mean by making such a noise? Quit honking that horn."<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.       What?
4. Did you feel anything as I read this paragraph to you?       What?
5. Did you smell anything?       What?
6. Did you taste anything?       What?
7. What did Tommy look like?
8. How was he dressed?
9. About how old was he?
10. What was Tommy doing?
11. Did you see the policeman?       What did he look like?
12. What was the policeman doing?
13. Did you hear the policeman's voice?       What kind of a voice did he have?

---

<sup>1/</sup> Ibid, p. 27.

14. Did you see a crowd? How big was it?
15. How many people did you see in the car? What were they doing?
16. How were they dressed?
17. Were there any cars in the street? Tell me about them.
18. Was the noise from the horn a steady one?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

Imagery Paragraph 4

The storekeeper in his white apron came running out. He was carrying the big bag of groceries that Mr. Hall had bought. In his hurry Mr. Hall had left the flour, eggs, and milk in the store.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you? What?
5. Did you smell anything? What?
6. Did you taste anything? What?
7. What did the storekeeper look like and what was he wearing?
8. About how old was he?
9. Did the storekeeper look like anyone you know? Who?
10. Where was the storekeeper?
11. Was there anyone near the storekeeper? Who?
12. Was the storekeeper moving?

---

<sup>1/</sup> Ibid, p. 28.

13. Were there any other people in your picture? How many?
14. Tell me everything you can about them.
15. What were they doing?
16. Were there many stores on the street? How many?
17. What kind of stores were they?
18. How far was the car from the storekeeper?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

STORY C<sup>1/</sup>

## Comprehension Test

## "A Wish That Came True"

Directions: Draw a line under the right ending for each of the following sentences.

1. Since the Burns family didn't have much money, the children
  - a. couldn't go to the parade.
  - b. couldn't go to the show.
  - c. couldn't go to the circus.
  
2. Sally Ann saw the elephants before the other children because
  - a. she could see better.
  - b. she ran ahead of the other children.
  - c. she was a smarter girl.
  
3. The children didn't see the band because
  - a. the men were in one of the trucks.
  - b. they had gone ahead to Spring City.
  - c. they were not dressed in their band suits.

---

<sup>1/</sup> Ibid, pp. 68 - 76.

4. Mrs. Burns invited the men to stay for supper.  
So the children were
  - a. happy.
  - b. sad.
  - c. sorry.
5. The children didn't know that Buzz was a clown  
until
  - a. he put on his clown suit.
  - b. he told them he was a clown.
  - c. one of the other men told them he was  
a clown.
6. Mrs. Burns gave the men these things for  
supper
  - a. chicken sandwiches.
  - b. ham sandwiches.
  - c. egg sandwiches.
7. The circus men got the truck out of the sand by
  - a. pushing it.
  - b. driving it out of the sand.
  - c. having the elephants pull it out of  
the sand.
8. After supper the children had fun because
  - a. Buzz did some tricks.
  - b. they told stories to each other.
  - c. Buzz played games with them.

9. The circus men paid for their supper by
- a. giving money to the children.
  - b. giving money to Mr. and Mrs. Burns.
  - c. showing tricks to the children.
10. The children were able to go to the circus because
- a. their mother gave them some money.
  - b. they saved their money.
  - c. Buzz gave them some tickets.

Directions: Read the five following sentences. Choose the sentence which tells what happened first in the story. Write 1 in the ( ) at the left. Then decide what happened second, third, fourth, and fifth in the story. Write 2, 3, 4, and 5 in the proper ( ).

- ( ) Sally Ann saw the elephants and the circus trucks.
- ( ) Buzz gave the tickets for the circus to the children.
- ( ) A truck had gone off the road.
- ( ) The circus men came to their house for supper.
- ( ) The children stopped to look at the circus sign.

Imagery Paragraph 5

"And that will be a wonderful sight," said Betty Jane. "We'll see elephants and giraffes and fierce lions and tigers. And we'll hear the band play."<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you? What?
5. Did you smell anything? What?
6. Did you taste anything? What?
7. Did you see Betty Jane? What did she look like?
8. What was Betty Jane doing?
9. Did you see any other people? Tell me about them.
10. What were the people doing?
11. What animals did you see?
12. Where were the animals?
13. Were the animals making any noises? Tell me about them.
14. Did you see the band? How big was it?

---

<sup>1/</sup> Ibid, p. 69.

15. How was the band dressed?
16. Was the band playing? What?
17. Did you see any other people besides Betty Jane and the band?
18. What were they doing?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

Imagery Paragraph 6

The circus men were shouting and running around. And no wonder! There was something wrong! A big red and gold truck had gone off the road and its wheels were stuck in the sand.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you?      What?
5. Did you smell anything?      What?
6. Did you taste anything?      What?
7. Did you see the truck?      Tell me about it.
8. How many men did you see?
9. How were they dressed?
10. What were the men doing?
11. Were there any other people around? Tell me about them.
12. What were they doing?
13. How far off the road had the truck gone?

---

<sup>1/</sup> Ibid, p. 70.

14. Were all the wheels stuck in the sand? How were the men getting the truck out of the sand?
15. Did you see anything in the truck? What?
16. Were there any people in the truck? Who?
17. What kind of a day was it?
18. What time of the day was it?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

STORY D<sup>1/</sup>

## Comprehension Test

## "Fluffytail and The Peanut Hunt"

Directions: Draw a line under the correct answer to the following questions.

1. Why didn't Fluffytail go down the tree and get some peanuts?
  - a. He was afraid of Bill.
  - b. He didn't want any peanuts.
  - c. The dog was near the tree.
2. Why was Bill hiding peanuts?
  - a. They were going to play a game in the yard.
  - b. Bill liked to find peanuts.
  - c. Bill didn't want Fluffytail to have the peanuts.
3. Who was giving the birthday party?
  - a. Bill
  - b. Grandmother Page
  - c. Ellen

---

1/ Ibid, pp. 195 - 201.

4. Why did Fluffytail hide some of the peanuts in the ground?
  - a. because he wasn't hungry any more.
  - b. so that he would have food in the winter.
  - c. so that Bill could not find the peanuts.
5. How did the children guess who had taken the peanuts?
  - a. They saw tracks on the ground.
  - b. They asked Grandmother Page.
  - c. They heard Fluffytail chattering.
6. Who spoiled the first peanut hunt?
  - a. Fluffytail
  - b. Bill
  - c. Grandmother Page
7. What was Grandmother Page's dog named?
  - a. Skipper
  - b. Spot
  - c. Pal
8. What did the dog do to Fluffytail?
  - a. He made him leave the yard.
  - b. He chased him.
  - c. He left him alone.

9. Who won the prize for finding the most peanuts?
- a. Bill
  - b. Ellen
  - c. Lily
10. After the children left, what did Fluffytail do?
- a. He had a peanut hunt.
  - b. He ran away from the yard.
  - c. He stayed up in the tree.

Directions: Read the five following sentences. Choose the sentence which tells what happened first in the story. Write 1 in the ( ) at the left. Then decide what happened second, third, fourth, and fifth in the story. Write 2, 3, 4, and 5 in the proper ( ).

- ( ) Fluffytail had a peanut hunt.
- ( ) They got ready for the party.
- ( ) Bill hid some peanuts again.
- ( ) Fluffytail spoiled the peanut hunt.
- ( ) The dog made sure that Fluffytail did not spoil the peanut hunt.

Imagery Paragraph 7

One morning he (Fluffytail, the squirrel) looked down from the limb of an oak tree and chattered and chattered and chattered. He was excited because he saw Bill hiding peanuts in the yard.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you? What?
5. Did you smell anything? What?
6. Did you taste anything? What?
7. Did you see Bill? Tell me how he looked.
8. What was Bill doing?
9. What was Bill wearing?
10. Was there anyone else in the yard? Who?
11. Describe the yard to me.
12. What time of the year was it?

---

<sup>1/</sup> Ibid, p. 193.

13. Did you see Fluffytail? What color was he?
14. Where was Fluffytail?
15. What was he doing?
16. How big was the tree that Fluffytail was in?
17. Did you see any peanuts? Where?
18. What kind of a day was it?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it?
25. Can you tell me anything else about your picture?  
What?

Imagery Paragraph 8

Then they (the children) had another peanut hunt. This time they enjoyed the game. They found peanuts among bushes, behind stones, in a little pile of dry leaves, and in all sorts of other places.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you? What?
5. Did you smell anything? What?
6. Did you taste anything? What?
7. Did you see any children? How many?
8. What were they wearing?
9. What were they doing?
10. Were there any grownups with the children? How many?
11. Tell me what they were wearing and what they were doing.
12. Describe the yard to me.

---

<sup>1/</sup> Ibid, p. 200.

13. Did you see the pile of leaves? How big was it?
14. What colors were the leaves?
15. Did you see any of the peanuts? Where?
16. Did you see any animals? Where?
17. What kind of a day was it?
18. What time of the year was it?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it?  
In what way?
25. Can you tell me anything else about your picture?  
What?

STORY E<sup>1/</sup>

## Comprehension Test

## "Chip, The Baby Chipmunk"

Directions: Draw a line under the right ending for each of the following sentences.

1. Chip came out from his house because
  - a. he was too hot to stay under the log.
  - b. he smelled the breakfast cooking.
  - c. his mother told him to go out.
2. Chip had been taught to keep away from people by
  - a. his mother.
  - b. his father.
  - c. his grandmother.
3. Bill wanted to tame Chip because
  - a. he was a pretty animal.
  - b. he would make a new pet.
  - c. he had never been tamed before.
4. Bill tamed him by
  - a. calling him.
  - b. patting him.
  - c. leaving food on the ground.

---

1/ Ibid, pp. 202 - 210.

5. Chip was
  - a. a brave little animal.
  - b. a noisy little animal.
  - c. a naughty little animal.
6. Chip was able to make a hole in the box since
  - a. he had small paws.
  - b. he had sharp teeth.
  - c. the box was cardboard.
7. Chip was caught in the trap made by
  - a. Ellen.
  - b. Mrs. Page.
  - c. Bill.
8. Chip stayed in the box
  - a. a day.
  - b. a week.
  - c. an hour.
9. Bill did not want to give up Chip, but he knew
  - a. Chip wanted to be free.
  - b. Bill's mother wanted him to let Chip go.
  - c. he could not take him home.
10. Chip was helped to get out of the box by
  - a. his sister.
  - b. his mother.
  - c. his father.

Directions: Read the five following sentences. Choose the sentence which tells what happened first in the story. Write 1 in the ( ) at the left. Then decide what happened second, third, fourth, and fifth in the story. Write 2, 3, 4, and 5 in the proper ( ).

- ( ) Chip was getting tame.
- ( ) Mother helped set Chip free.
- ( ) Bill left bits of orange on the ground.
- ( ) Chip got caught in Bill's trap.
- ( ) The children saw Chip.

Imagery Paragraph 9

Sniff, sniff, sniff went Chip, the baby chipmunk. He had just come from his home underneath a big log, because he smelled food. Somebody was cooking breakfast among the trees nearby.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you?      What?
5. Did you smell anything?      What?
6. Did you taste anything?      What?
7. Did you see the log?      How big was it?
8. Was there anything around the log?      What?
9. What was the chipmunk doing?
10. Was the chipmunk hurrying?      Where?
11. Did you see any people?      Tell me about them.
12. How many people did you see?

---

<sup>1/</sup> Ibid, p. 202.

13. How were they dressed?
14. What were the people doing?
15. How were they cooking the breakfast?
16. What were they cooking?
17. Did you smell it?      What?
18. What kind of a day was it?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one?      What colors?
22. Have you ever seen this place?      Where?
23. Were you in the picture?      Where?
24. Did your picture change as we talked about it?  
In what way?
25. Can you tell me anything else about your picture?  
What?

Imagery Paragraph 10

Chip gnawed a hole in the cardboard box with his sharp teeth and began to nibble the chocolate cookies. He was so busy nibbling them that he did not hear Bill coming.<sup>1/</sup>

Questions

1. Did you have a picture in your mind as I read this paragraph to you?
2. Tell me all that you saw as I read this paragraph to you.
3. Tell me all that you heard as I read this paragraph to you.
4. Did you feel anything as I read this paragraph to you?      What?
5. Did you smell anything?      What?
6. Did you taste anything?      What?
7. Where was Chip?
8. What was he doing?
9. Was there anyone in the picture but Chip?      Who?
10. What was Bill wearing?
11. What was Bill doing?
12. Where was Bill?

---

<sup>1/</sup> Ibid, p. 207.

13. Was Bill moving? How?
14. What kind of a day was it?
15. Did you see the box? How big was it?
16. How big was the hole that Chip gnawed in the box?
17. Where was the box?
18. Did you see any cookies? How many?
19. Was your picture a clear or a blurred one?
20. Was your picture a moving or a still one?
21. Was your picture a colored one or a black and white one? What colors?
22. Have you ever seen this place before? Where?
23. Were you in the picture? Where?
24. Did your picture change as we talked about it? In what way?
25. Can you tell me anything else about your picture? What?

SAMPLE OF SCORING

Girl #9

Paragraph 1

<u>Question</u>	<u>Response</u>	<u>Point Value</u>
1	Yes.	0
2	Big forest with trees. Tommy. Sailboat going across pond.	7
3	Tommy talking.	1
4	No.	0
5	No.	0
6	No.	0
7	Three - Mother, Father, Tommy	3
8	Tommy - 7 Mother - 22 Father - 39	3
9	Tommy - blue pants, yellow striped shirt Mother - plaid dress Father - brown pants, black coat	11
10	Tommy - beside water Mother and Father - beside trees	2
11	Tommy - sailing boat Mother and Father - looking at birds flying around	4
12	Two o'clock	1
13	Summer	1
14	Sunny	1
15	Yes - Big. Shiny blue water. Birds flying around.	4
16	Yes. Brown with green leaves.	3
17	No.	0
18	Yes. Little sailboat.	2
19	Clear.	0
20	Moving.	0
21	Colored one. Green grass, green leaves, brown trunks of trees, blue water, blue pants, yellow shirt, brown pants, black coat	3
22	No.	0
23	No.	0
24	No.	0
25	Yes. White and gray birds flying around.	2
<u>TOTAL</u>		48