DOCUMENT RESUME

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AUTHOR	Fryburg, Estelle L.
TITLE	The Test of Cognition with Scoring Guide, Literature Review, and Description of Data Analyses in Progress.
PUB DATE	72
NOTE	82p.; See related documents CS 201 320-375
AVAILABLE FROM	Dr. Estelle L. Fryburg, Manhattan College, Manhattan College Parkway, Bronx, New York 10471 (Revised form of the test; Write author for price)
EDRS PRICE	MF-$0.75 HC Not Available from EDRS. PLUS POSTAGE
DESCRIPTORS	*Educational Research; Language Arts; *Language Development; *Language Skills; *Measurement Instruments; Primary Grades; *Reading Achievement; Reading Diagnosis; Reading Tests; Research Tools; Resource Materials
IDENTIFIERS	*The Research Instruments Project; TRIP

ABSTRACT

Designed to evaluate a child's receptive and expressive language ability, the instrument will contribute to present knowledge concerning the language development of both standard and nonstandard English speakers, explore the relationships of language development to reading achievement, provide a description of the language-reading relationship, and serve as a diagnostic procedure to detect and prevent reading difficulties. The test is individually administered in approximately thirty minutes, and a separate sitting is recommended for each of the four subtests related to auditory perception, visual perception, syntactic patterning, and drawing. [This document is one of those reviewed in The Research Instruments Project (TRIP) monograph "Measures for Research and Evaluation in the English Language Arts" to be published by the Committee on Research of the National Council of Teachers of English in cooperation with the ERIC Clearinghouse on Reading and Communication Skills. A TRIP review which precedes the document lists its category (Language Development), title, author, date, and age range (primary), and describes the instrument's purpose and physical characteristics.] (RB)

NCTE Committee on Research

The Research Instruments Project (TRIP)

The attached document contains one of the measures reviewed in the TRIP committee monograph titled:

Measures for Research and Evaluation in the English Language Arts

TRIP is an acronym which signifies an effort to abstract and make readily available measures for research and evaluation in the English language arts. These measures relate to language development, listening, literature, reading, standard English as a second language or dialect, teacher competencies, or writing. In order to make these instruments more readily available, the ERIC Clearinghouse on Reading and Communication Skills has supported the TRIP committee sponsored by the Committee on Research of the National Council of Teachers of English and has processed the material into the ERIC system. The ERIC Clearinghouse accession numbers that encompass most of these documents are CS 201 320 - CS 201 375.

NATIONAL COUNCIL OF TEACHERS OF ENGLISH
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Category: Language Development

Title: "The Test of Cognition"

Author: Estelle L. Fryburg

Age Range: Primary

Description of Instrument:

Purpose - To evaluate a child's receptive and expressive language ability

Date of Construction - 1972

Physical Description - The development of the test rests upon the belief that all beginning school instruction is dependent upon the child's ability to derive meaning from and respond to the oral language of the teacher. The author anticipates that the instrument will contribute to present knowledge concerning the language development of both standard and non-standard English speakers, explore the relationships of language development to reading achievement, provide a description of the language-reading relationship observed among middle- and lower-class children of normal and retarded intellectual development, and serve as a diagnostic procedure to detect and prevent reading difficulties. The test is individually administered in approximately 30 minutes. A separate sitting is recommended for each of the four subtests related to auditory perception, visual perception, syntactic patterning, and drawing. A content outline with illustrative items follows:

I. Auditory Perception

A. Perception of Minimal Pairs

1. Recognition of Vowel Differences (pin-pen)
2. Recognition of Differences between Initial and Final Paired Consonants (three-free)
3. Comparison of Medial Consonants (meshing-messing)

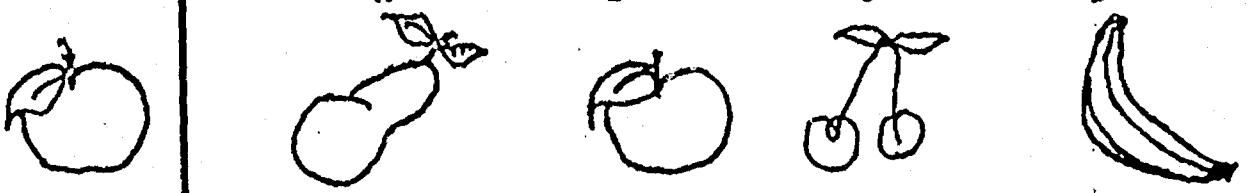
B. Repetition of Auditory Stimuli

1. Digits (4 - 7 - 3)
2. Nonsense Syllables (tepper)
3. Words (valley)
4. Phrases (a glass of milk)
5. Sentences (She has five cents to spend.)

II. Visual Perception

A. Similarities

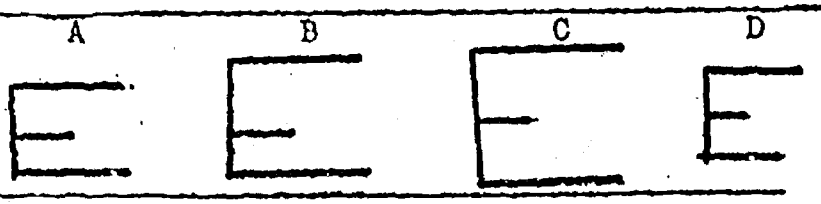
4



B. Differences

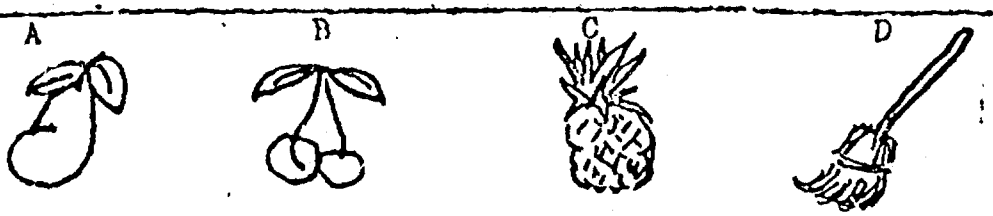
("Which one is the smallest?")

5



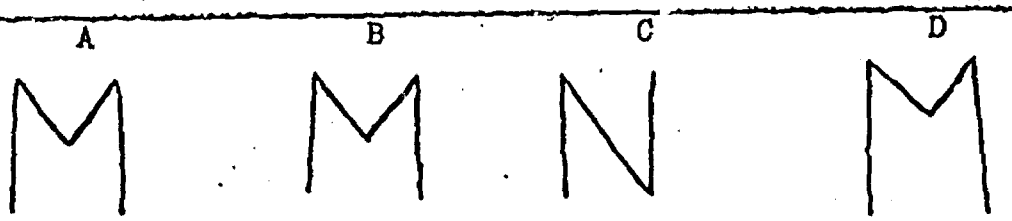
("Which one does not belong?")

9



("Which one does not look like the others?")

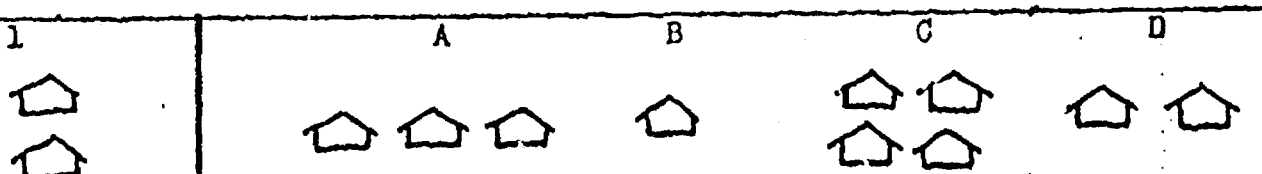
13



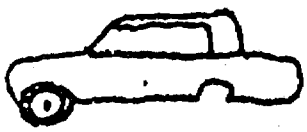
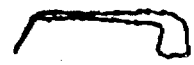
C. Numerical Analogies

("Which one has the same number?")

1



D. Missing Parts

5	A	B	C	D
				

E. Visual Perception of Words

("Show me the group of letters that is a word.")

	A	B	C	D
3	ptay	play	piay	layp

III. Auditory and Visual Perception - Syntactic Screening

A. Receptive

B. Expressive

(Examples on pages 4, 5, and 6.)

IV. Visual - Kinesthetic

A. Drawing Figures (circle)

B. Human Figure Drawing

The Test of Cognition

III. Auditory and Visual Perception

Syntactic Screening

SAY TO THE PUPIL:

Receptive: I am going to tell you about some pictures I shall show you. (Say a sentence for each picture. e.g. The man has a ball. etc.) Point to the picture I tell you about. (Say one sentence at a time, as the child indicates which picture is being referred to.)
Demonstrate all the receptive pictures first. The asterisk which follows one of the pairs of sentences should be elicited first from the child.)
Score: 1 for each correct indication, 2 if both are correct.

Expressive: Now I shall tell you about some other pictures, and when I point to the picture, you will tell me what I told you about the picture. (Say each of the sentences. Then the sentence with the asterisk is elicited from the child first. The examiner points to the picture, and the child tells about the picture.)
Score: 1 for each correct repetition, 2 if both sentences are correct. No errors. Errors include omissions, substitutions, additions, changes in words or in order of words, but not contractions, e.g. we're for we are.

Receptive

1. The truck is on the table._____
   The truck is under the table.*_____
2. The girl is standing.*_____
   The girl is not standing._____
3. The girl sees the boy._____
   The girl sees the boys.*_____
4. The dog sees himself.*_____
   The dog sees the shelf._____
5. The wagon hits the train._____
   The train hits the wagon.*_____
6. This is a mother bird.*_____
   This is Mother's bird._____
7. The boy walked._____
   The boy walks.*_____
8. Has John finished lunch?*_____
   John has finished lunch._____
9. This is my coat.*_____
   That is my coat._____
10. The man shows the boy the dog._____
    The man shows the dog the boy.*_____

Expressive

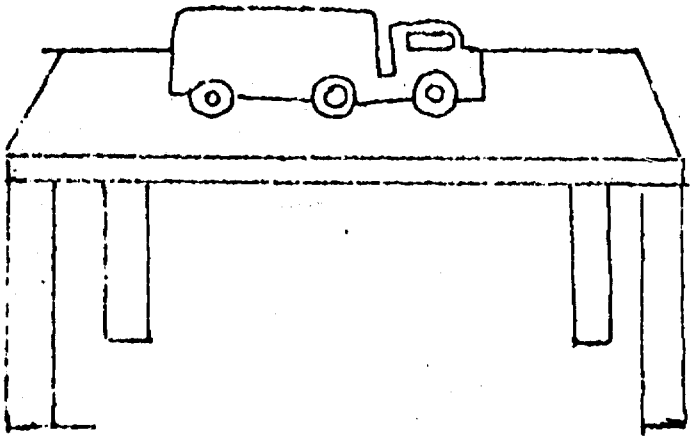
1. The boy is drinking.*_____
   The boy is not drinking_____
2. The ball is behind the chair._____
   The ball is under the chair.*_____
3. The dog chases the cat.*_____
   The cat chases the dog._____
4. The cat sees the bird._____
   The cat sees the birds.*_____
5. The man washes himself.*_____
   The man washes the shelf._____
6. This is a baby elephant._____
   This is Baby's elephant.*_____
7. The girl skipped.*_____
   The girl skips._____
8. The book is on the shelf._____
   Is the book on the shelf?*_____
9. That is my ball.*_____
   This is my ball._____
10. The mother brings the brother the sister.*_____
    The mother brings the sister the brother._____

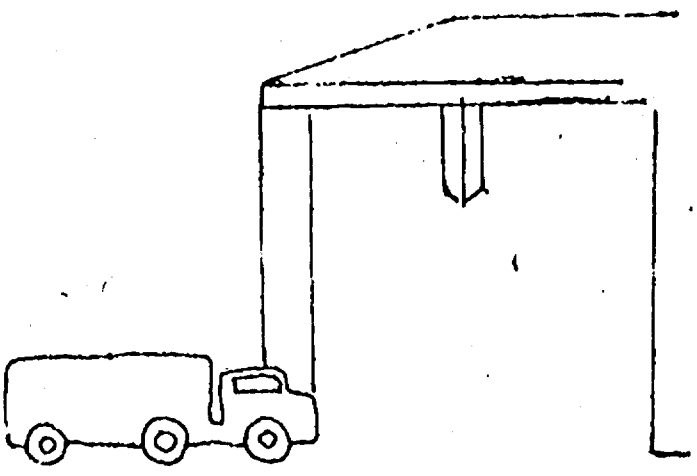
The Test of Cognition

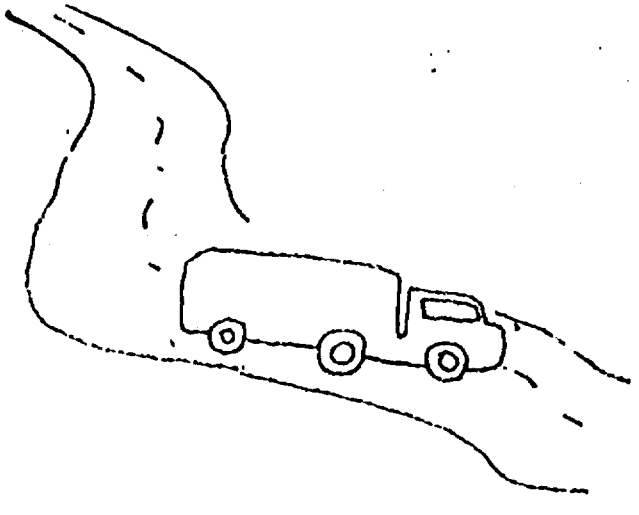
III. Auditory and Visual Perception - Syntactic Screening

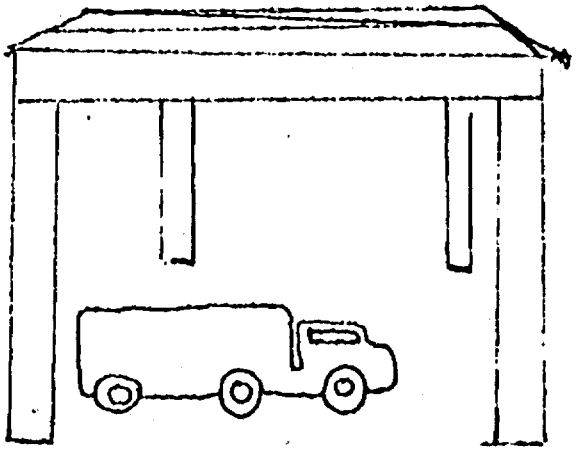
A. Receptive

Item 1







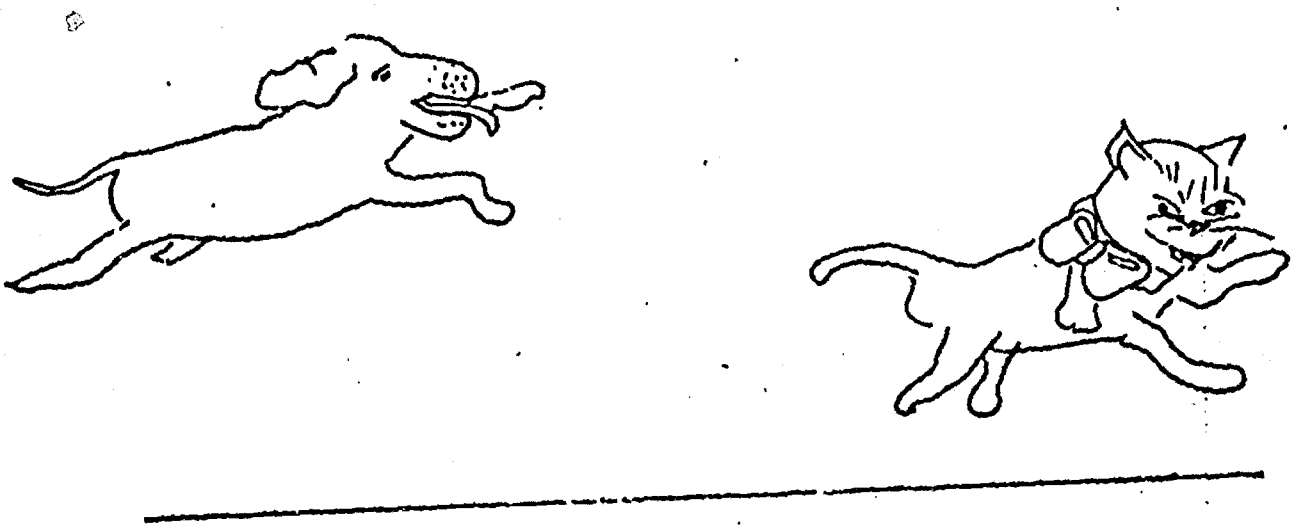


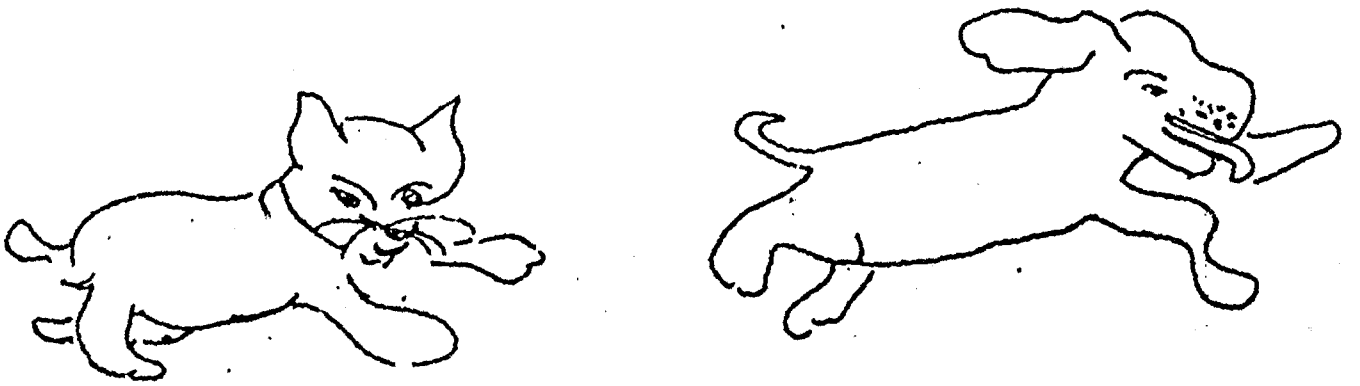
The Test of Cognition

III. Auditory and Visual Perception - Syntactic Screening

B. Expressive

Item 3





Validity, Reliability and Normative Data:

The instrument was piloted with lower- and middle- socioeconomic-class boys and girls in regular New York City public school classrooms. It was also used with seventh, eighth, and ninth grade reading disabled children of mixed socioeconomic levels at a university reading clinic. Elementary and secondary children identified as socially maladjusted and emotionally disturbed who were in special education programs were also administered the test. In regular classes in the public school, the instrument discriminated between children who give evidence of learning disability and children who were progressing in normal patterns. At the learning disabilities clinic, the instrument was able to indicate specific areas of weakness. When teaching was directed to strengthen these areas, progress was evidenced. A scoring guide, a literature review, and a description of data analyses now in progress related to content validity, construct validity, and reliability are available from ERIC.

Ordering Information:

EDRS

Related Documents:

A more recent test based on "The Test of Cognition" is being developed by the author.

The Test of Cognition

Estelle L. Fryburg, Ph.D.

The Nature and Purpose of the Test

The test is designed to evaluate the cognitive functioning of children in tasks which are related to mastery of and mathematical skills. Its purpose is to provide an evaluative scale for children who do not perform on standardized group tests in order to identify a child's current level of functioning.

Language Evaluation
The Auditory and Visual Perceptual Functioning of the Child

This test is administered to each child individually by the teacher. The child participates in the testing and is given the opportunity to demonstrate his ability to perform at each of the tasks.

The test takes approximately 30 minutes to complete.

NOTE:

Some children may not be able to direct attention to the tasks for the required time. It is suggested that sittings be scheduled as follows:

First sitting:	Auditory Perception
Second sitting:	Visual Perception
Third sitting:	Syntactic Patterning
Fourth sitting:	Drawing

Before administering the tests, the examiner should be familiar with all of the directions and with each test itself.

DIRECTIONS FOR ADMINISTERING:

The test is to be administered to each pupil individually.

Before beginning the testing, ask the child his name and his birthdate. Indicate his ability to respond by marking the record form with a "C" if he is able to respond, or an "X" if he is unable to respond.

The directions should be read to the pupil verbatim. If there seems to be any misunderstanding, the directions may be repeated or explained, but no help should be given on specific items.

The examiner should have a test booklet and an answer sheet to record the pupil's responses.

I. Auditory Perception

SAY TO THE PUPIL:

I am going to read some words to you - two words at a time. I want you to tell me whether the words are the same or different. Remember, if the two words are exactly the same, you say 'yes.' If they are not exactly the same, you say 'no.'

Let's try a few pairs for practice.

Man - man. Did I say the same words or two different words? Wait for the pupil to respond.

Let's try another one.

Hat - pat. Did I say the same word or two different words?

Be certain that the child understands the concept of the same and different.

The examiner should enunciate clearly and speak at a moderate rate.

Mark "C" on the answer sheet correct.
Mark "X" on the answer sheet incorrect.

I. Auditory Perception (maximum 30 points)

A. Auditory Perception of Minimal Pairs

Recognition of Vowel Differences (10 points)

1.	fed	fed_____	6.	time Tom_____
2.	pin	pen_____	7.	steer stare_____
3.	main	men_____	8.	new new_____
4.	mad	men_____	9.	tour tore_____
5.	boy	boy_____	10.	book balk_____

Recognition f Differences Between
Initial and Final Paired Consonant Sounds (10 points)

1.	three	free_____	6.	their they_____
2.	ran	ran_____	7.	missed missed_____
3.	it's	it_____	8.	lake ba e_____
4.	your	you_____	9.	tool too_____
5.	moon	noon_____	10.	I'll I'll_____

Comparison of Medial Consonants (10 points)

1.	mother	mother_____	6.	tested tested_____
2.	meshing	messing_____	7.	walked walked_____
3.	sending	sending_____	8.	nothing nothing_____
4.	taking	taping_____	9.	wanting walking_____
5.	telling	telling_____	10.	testing tessing_____

B. Repetition of Auditory Stimulii (maximum 25 points)

1. Digits (5 points)

SAY TO THE PUPIL:

I am going to say a number. Say exactly what I say. Listen, say "2."

Mark "C" on the answer sheet if correct.
Mark "X" on the answer sheet if incorrect.

a. 4 - 7_____
b. 6 - 4 - 1_____
c. 4 - 2 - 1 - 3_____
d. 3 - 1 - 8 - 5 - 9_____
e. 4 - 7 - 3 - 8 - 5_____

2. Nonsense Syllables (5 points)

SAY TO THE PUPIL:

I am going to say some sounds. Say exactly what I say. Listen, say "fap."

Mark "C" on the answer sheet if correct.
Mark "X" on the answer sheet if incorrect.

a. wep_____
b. tepper_____
c. luppering_____
d. flufferingly_____
e. tifferinglier_____

3. Words (5 points)

SAY TO THE PUPIL:

I am going to say some words. Say exactly what I say. Listen, say "boy."

Mark "C" on the answer sheet if correct.
Mark "X" on the answer sheet if incorrect.

a. girl_____
b. mother_____
c. neighbor_____
d. valley_____
e. armadillo_____

4. Phrases (5 points)

SAY TO THE PUPIL:

I am going to say groups of words. Say exactly what I say. Listen, say "a pretty girl."

Mark "C" on the answer sheet if correct.
Mark "X" on the answer sheet if incorrect.

a. a glass of milk_____
b. going home later_____
c. a yellow school bus_____
d. the boy with the blue sweater_____
e. the door with the exit sign_____

5. Sentences (5 points)

SAY TO THE PUPIL:

I am going to say some sentences. Say exactly what I say. Listen, say "He runs."

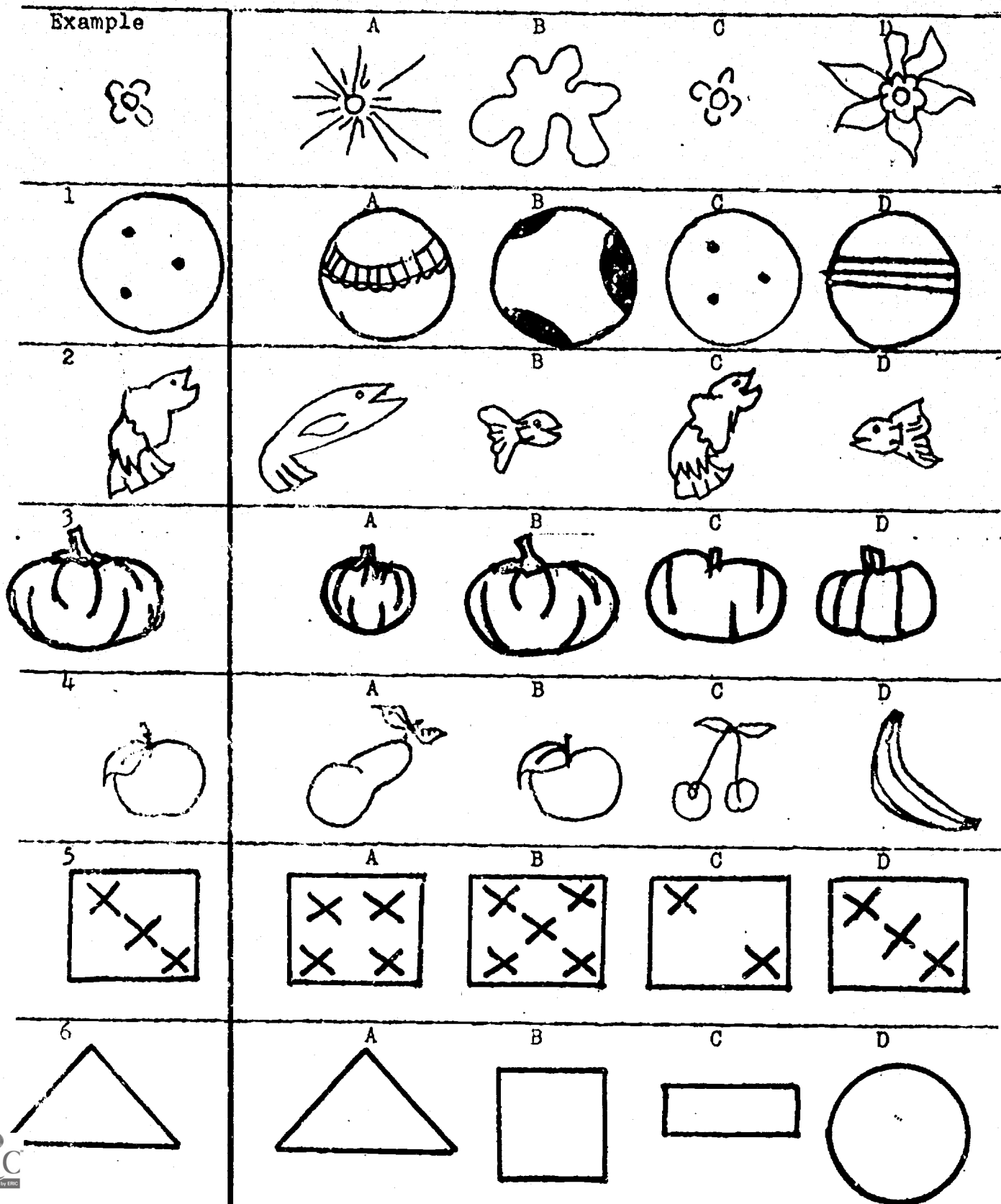
Mark "C" on the answer sheet if correct.
Mark "X" on the answer sheet if incorrect.

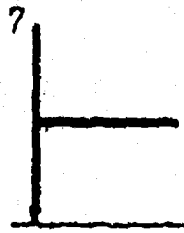
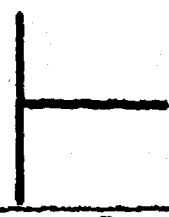
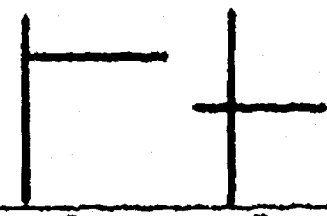
a. The boy walked fast._____
b. She has five cents to spend._____
c. My sister May is going to come home._____
d. Tell him to come into the room._____
e. I promise to try to do it._____

II. Visual Perception (Maximum 50 points)

A. Similarities (20 points)

Point to the picture on the left and say, "Now show me the one over here (gesture toward the items on the right) that looks just like this one.



	A	B	C	D
7				
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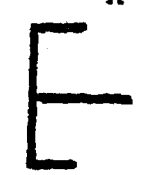
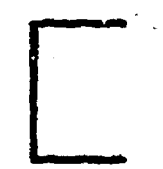
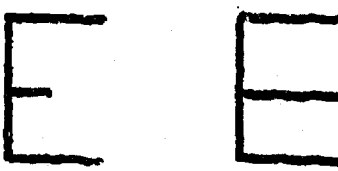
9				
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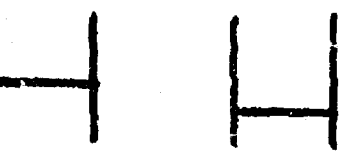
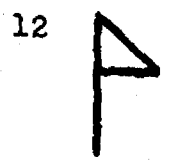
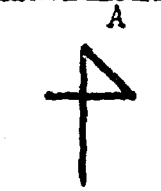
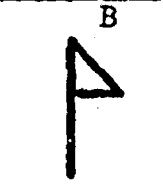
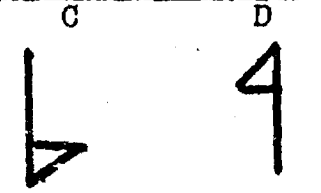
11				
12				
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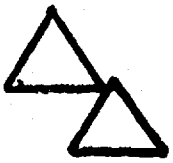
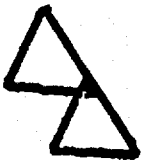
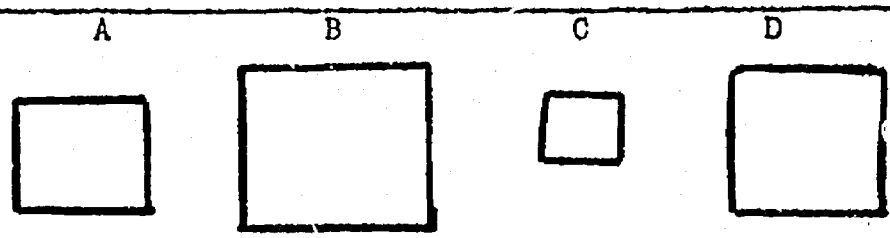
14	A	B	C	D
				
15	A	B	C	D
				
16	A	B	C	D
on	on	no	cn	en
17	A	B	C	D
saw	was	saw	aws	swa
18	A	B	C	D
they	the	they	them	then
19				
did	bid	bed	did	dad
20				
said	side	siad	sida	said

II. Visual Perception (15 points)

B. Differences

Point to the pictures and say "Now show me the one over here (gesture toward the items on right) that is the biggest one.

Example



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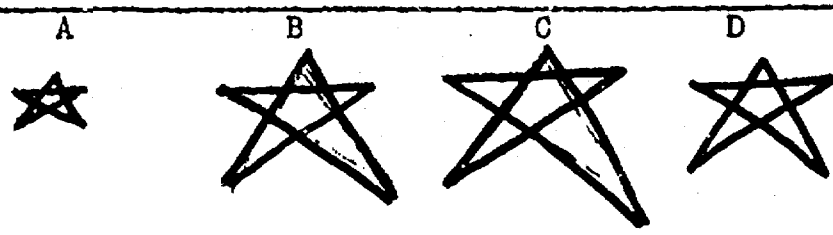

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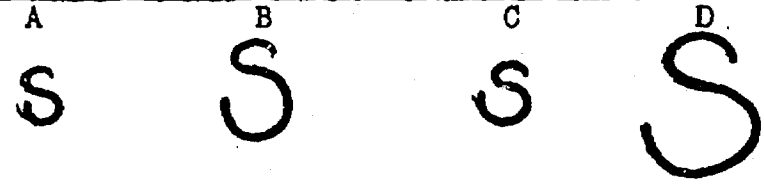

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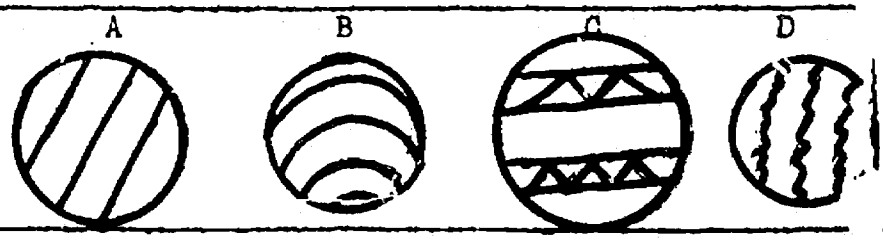
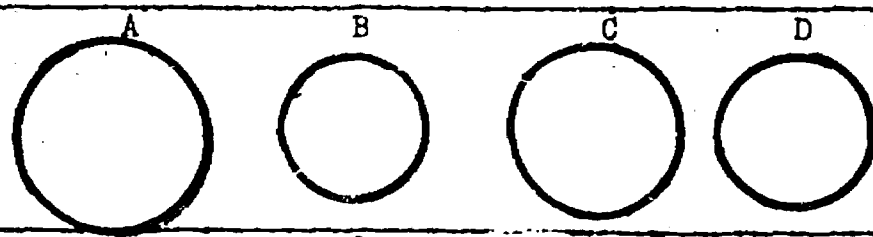


Point to the pictures, and say, "Now show me the one over here (gesture toward the items on right) that is the smallest one.

4



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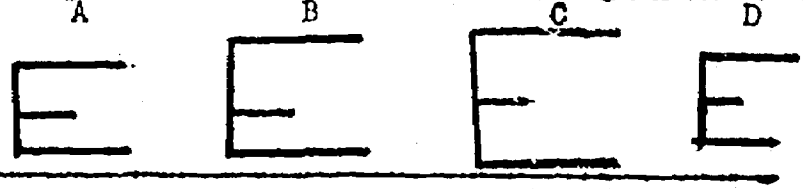
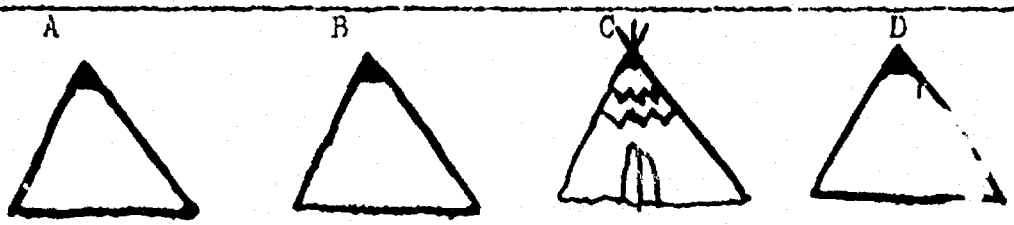


Point to the pictures in each item and say, "Three of these belong together. One does not belong. Show me which one does not belong with the others.

Example



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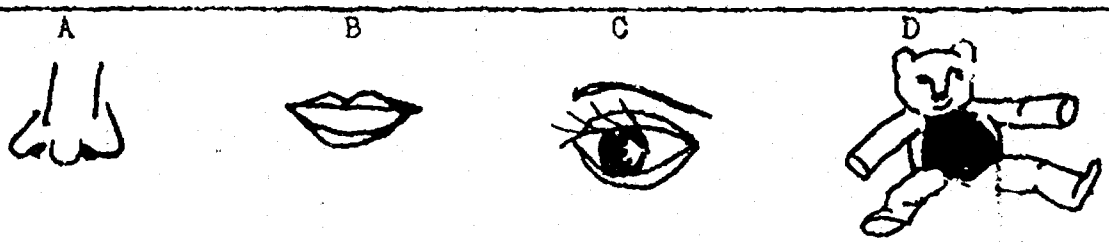

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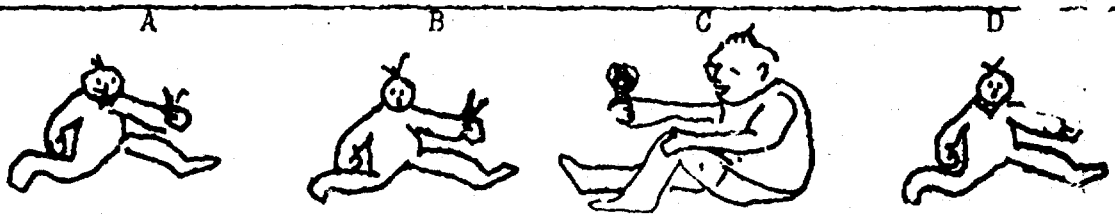

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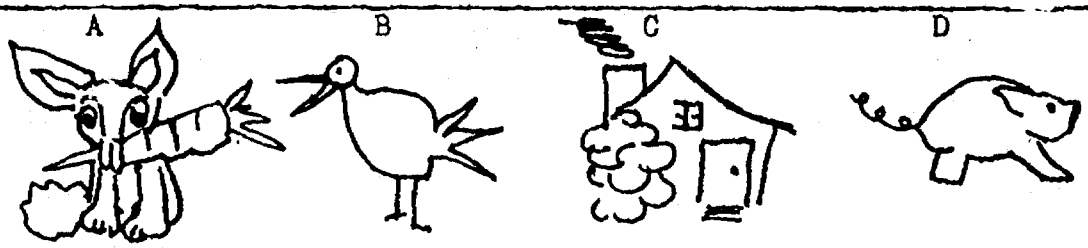

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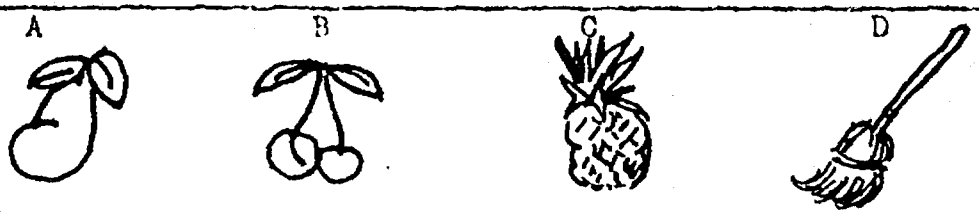

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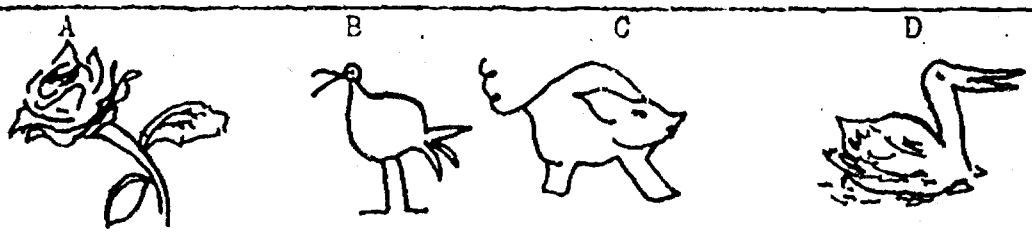
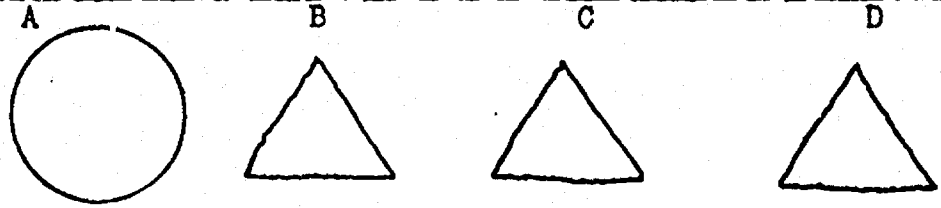


Point to the pictures in each item, and say, "Now, show me which one of these does not look like the others."

Example



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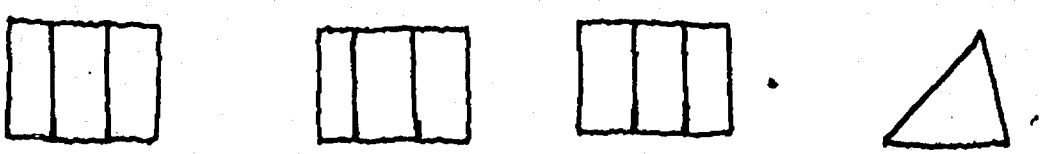

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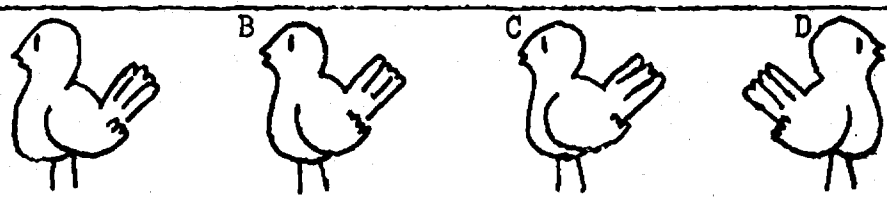

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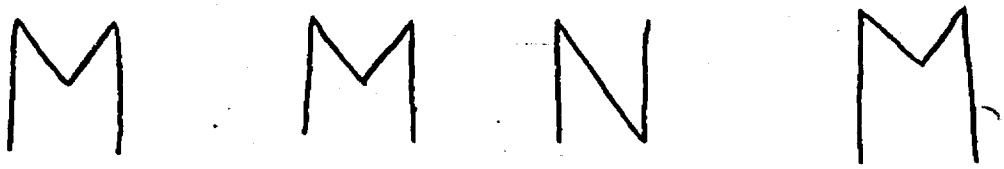

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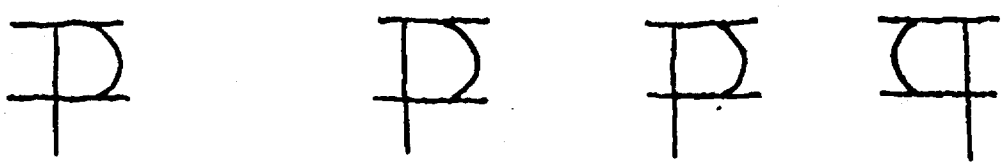

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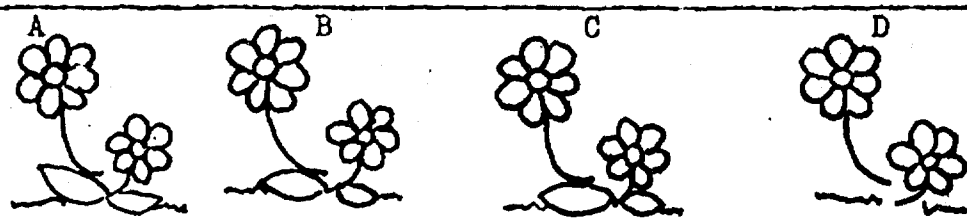
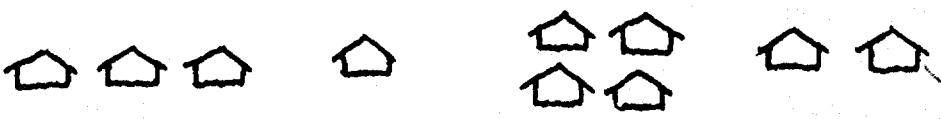
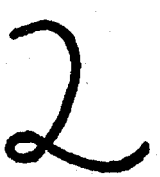
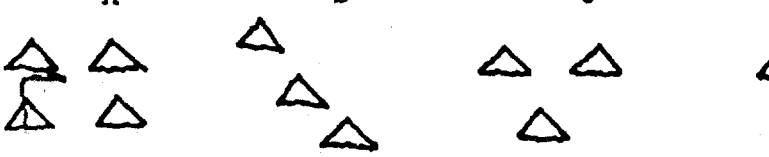
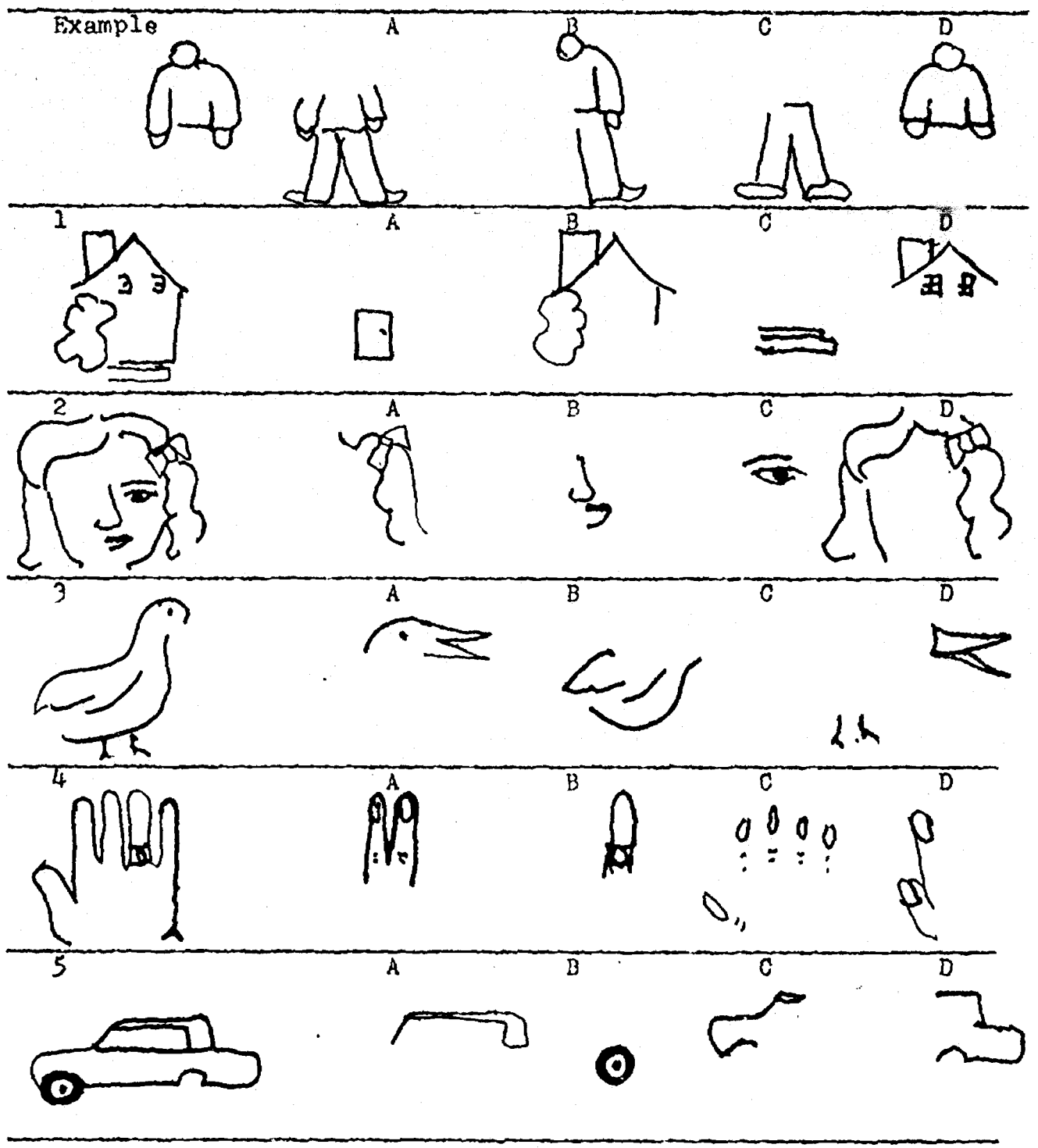


C. Numerical Analogies (5 points)
Point to the picture on the left and say,
"Now show me the one over here (gesture toward the items on the right) that has the same number as this one."

Example	A	B	C	D
				
1 				
2 				
3 				
4 	1	2	3	4
5	2	1	4	3

D. Missing Parts (5 points)
Point to the picture on the left and say,
"Now point to the one over here (gesture toward the items on the right) which belong to this one."



E. Visual Perception of Words (5 points)

SAY TO THE PUPIL:

Show me the group of letters which is a word. Point to the words in the example.

		A	B	C	D
EXAMPLE:		big	qig	biig	pag
1		nouse	house	honse	touse
2		cam	came	cawe	emac
3		ptay	play	piay	layp
4		went	ment	weht	wenf
5		wnere	where	wlere	wkere

III. Auditory and Visual Perception

Syntactic Screening (40 points)

SAY TO THE PUPIL:

Receptive: I am going to tell you about some pictures I shall show you. (Say a sentence for each picture. e.g. The man has a ball. etc.) Point to the picture I tell you about. (Say one sentence at a time, as the child indicates which picture is being referred to.)
Demonstrate all the receptive pictures first. The asterisk which follows one of the pairs of sentences should be elicited first from the child.)
Score: 1 for each correct indication, 2 if both are correct.

Expressive: Now I shall tell you about some other pictures, and when I point to the picture, you will tell me what I told you about the picture. (Say each of the sentences. Then the sentence with the asterisk is elicited from the child first. The examiner points to the picture, and the child tells about the picture.)
Score: 1 for each correct repetition, 2 if both sentences are correct. No errors. Errors include omissions, substitutions, additions, changes in words or in order of words, but not contractions, e.g. we're for we are.

Receptive

1. The truck is on the table. ____
   The truck is under the table.* ____
2. The girl is standing.* ____
   The girl is not standing. ____
3. The girl sees the boy. ____
   The girl sees the boys.* ____
4. The dog sees himself.* ____
   The dog sees the shelf. ____
5. The wagon hits the train. ____
   The train hits the wagon.* ____
6. This is a mother bird.* ____
   This is Mother's bird. ____
7. The boy walked. ____
   The boy walks.* ____
8. Has John finished lunch?* ____
   John has finished lunch. ____
9. This is my coat.* ____
   That is my coat. ____
10. The man shows the boy the dog. ____
    The man shows the dog the boy.* ____

Expressive

1. The boy is drinking.* ____
   The boy is not drinking. ____
2. The ball is behind the chair. ____
   The ball is under the chair.* ____
3. The dog chases the cat.* ____
   The cat chases the dog. ____
4. The cat sees the bird. ____
   The cat sees the birds.* ____
5. The man washes himself.* ____
   The man washes the shelf. ____
6. This is a baby elephant. ____
   This is Baby's elephant.* ____
7. The girl skipped.* ____
   The girl skips. ____
8. The book is on the shelf. ____
   Is the book on the shelf?* ____
9. That is my ball.* ____
   This is my ball. ____
10. The mother brings the brother the sister.* ____
    The mother brings the sister the brother. ____

The Test of Cognition

IV. Visual - Kinethetic

A. Drawing Geometric Figures (maximum 9 points)

The examiner has three 3 x 5 cards.
One card has a circle. (3)
One card has a square. (3)
One card has a diamond. (3)

Each figure is to be presented to the child separately. On a blank sheet of paper the child is directed to copy the design. All three designs are to appear on one sheet of paper.

SAY TO THE PUPIL:

Look at this picture. Now make one just like mine on your paper.

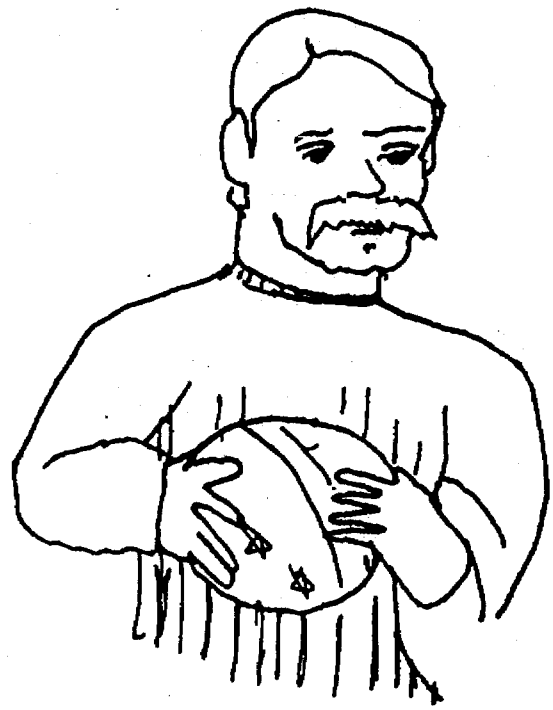
B. Drawing a Figure

Direct the child to turn over the paper on which he had drawn the geometric figures. Have a boy draw a picture of a boy and a girl draw a picture of a girl.

SAY TO THE PUPIL:

I want you to make a picture of a boy (or girl). Be sure to make a picture of the whole boy (or girl).

DEMONSTRATION PAGE RECEPTIVE



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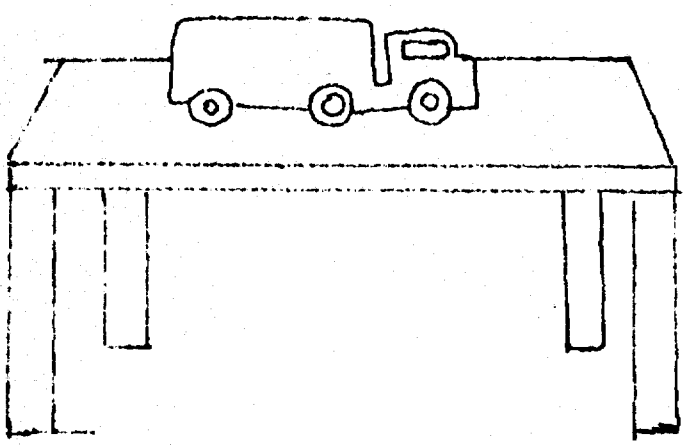

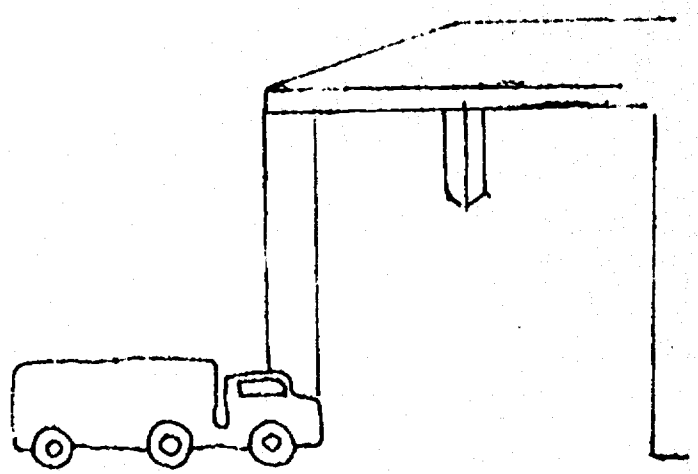

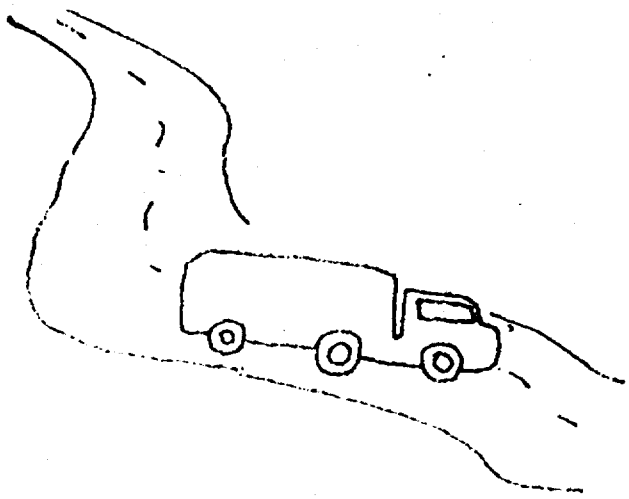

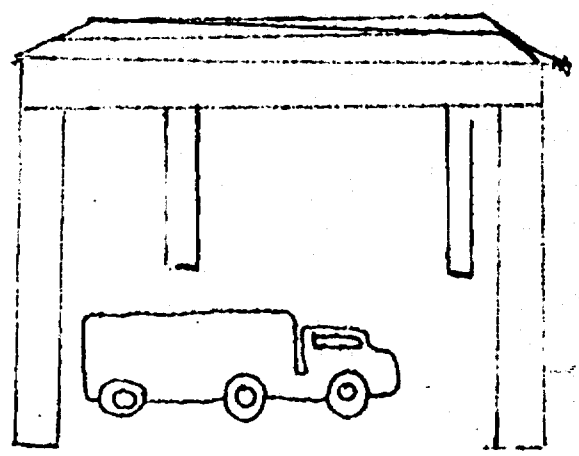

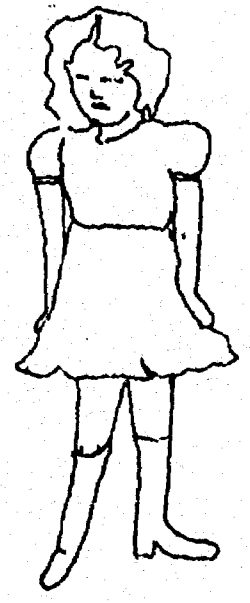

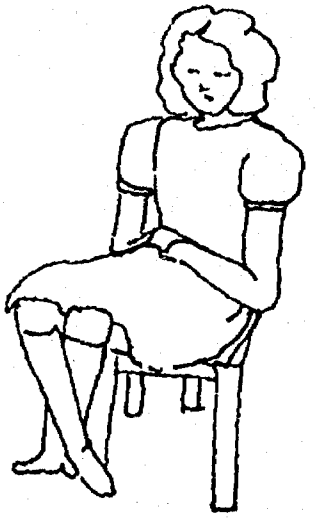

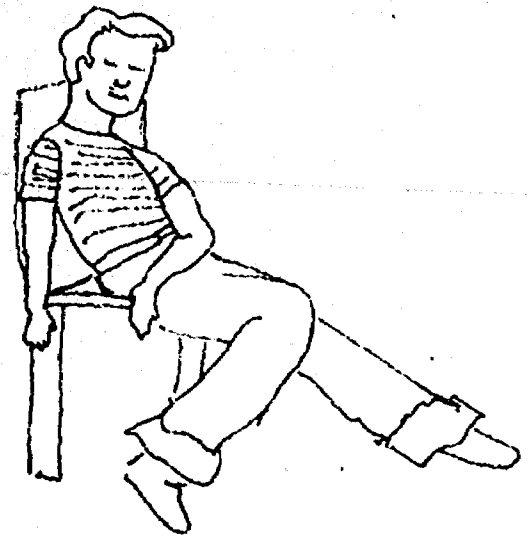

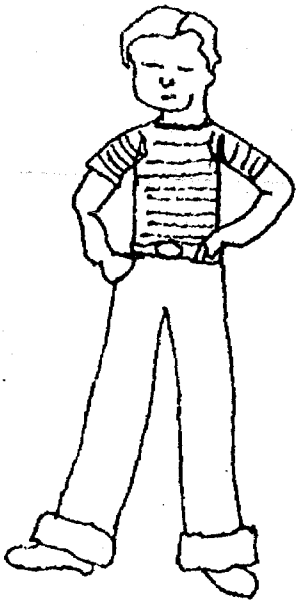

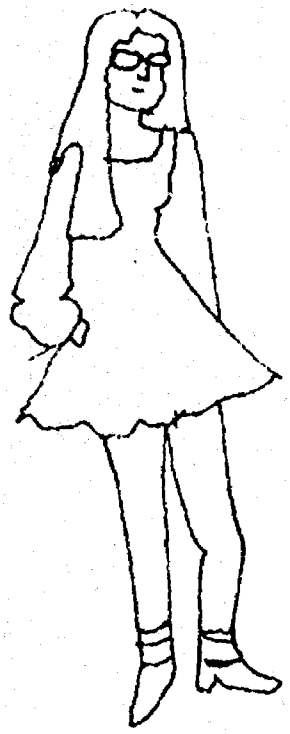

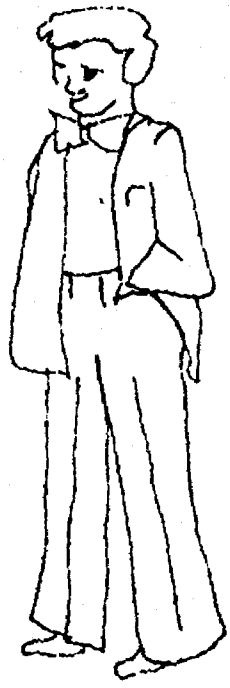

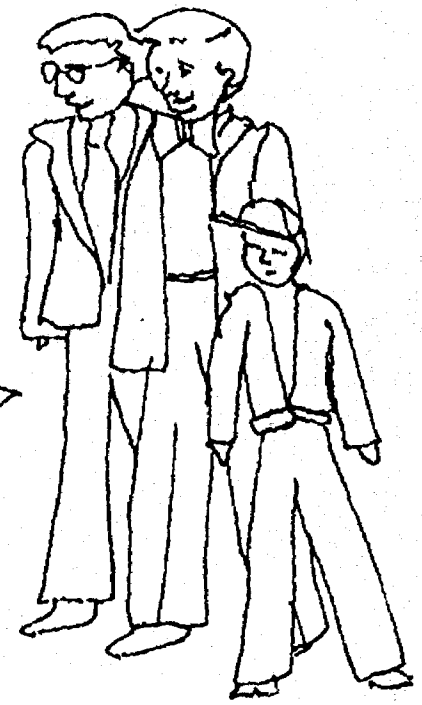

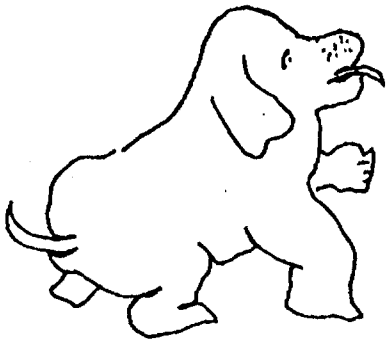

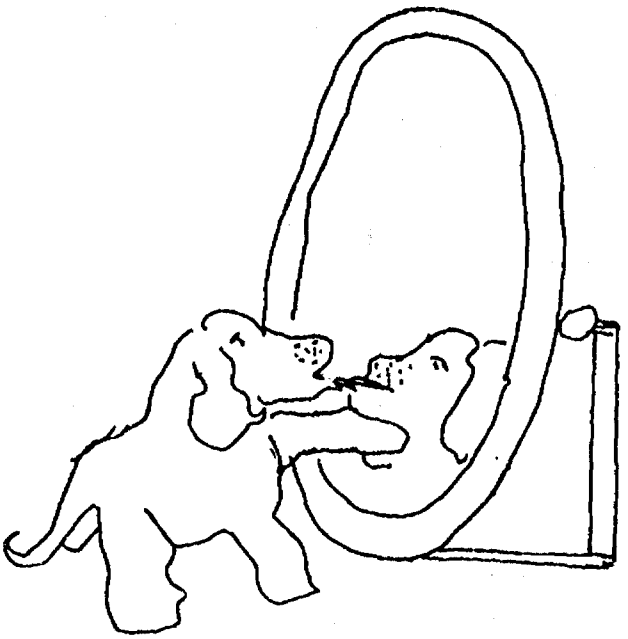

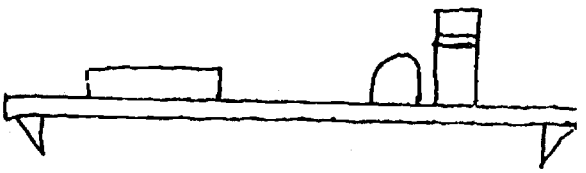

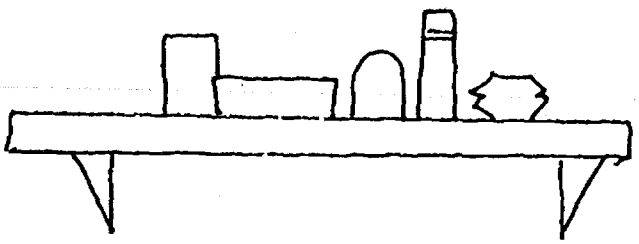

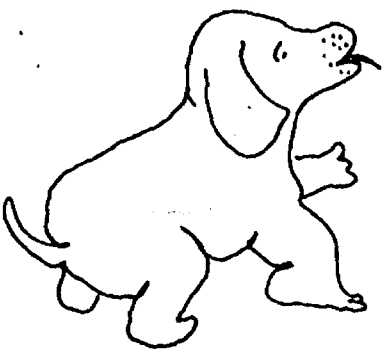

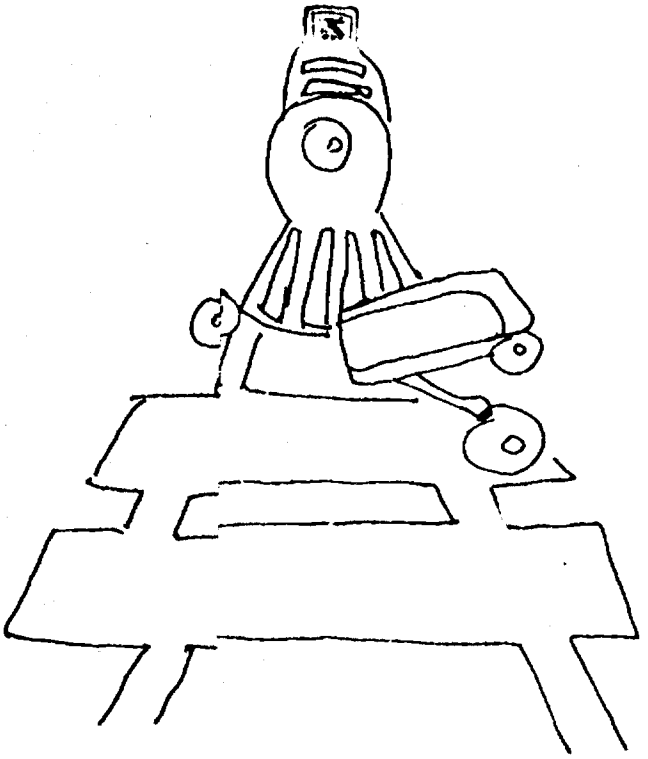

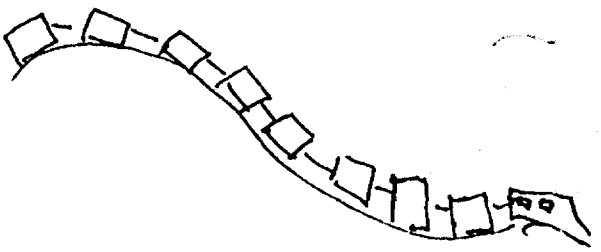

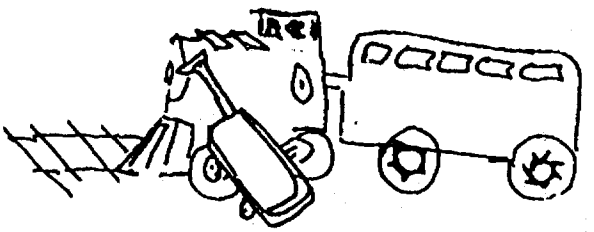

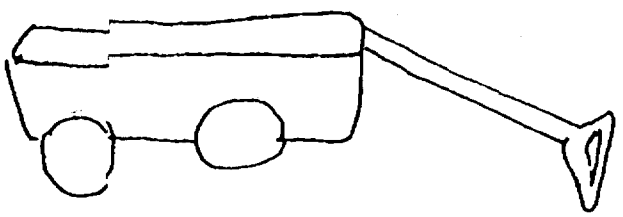

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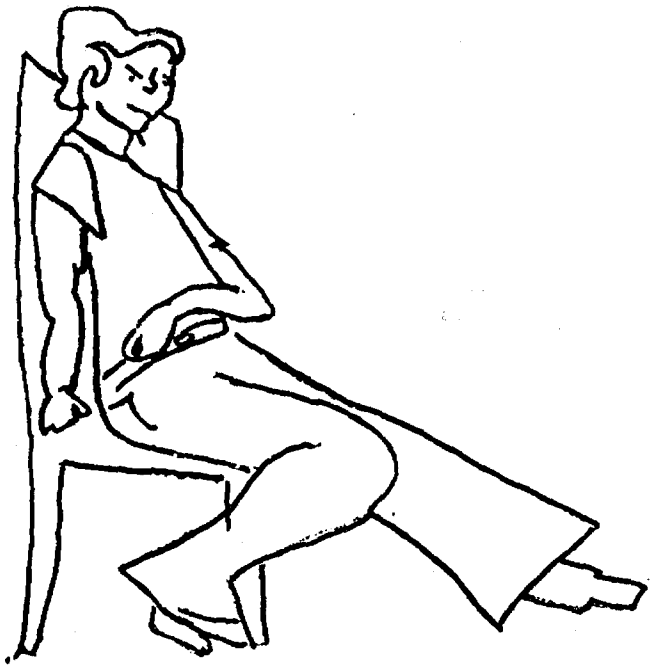

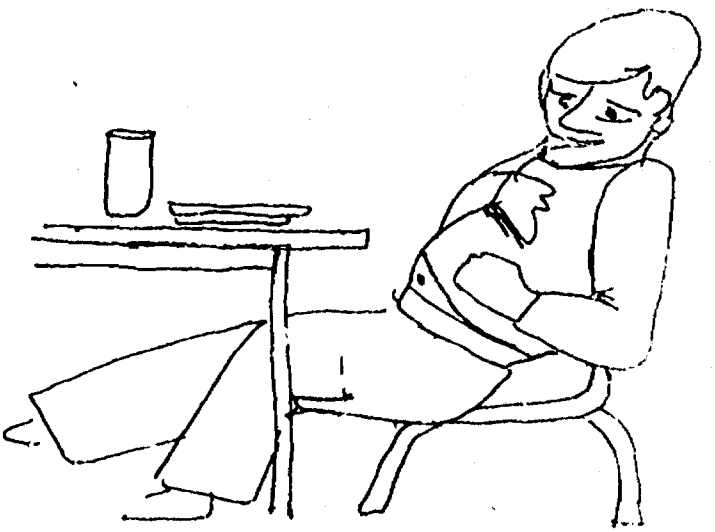

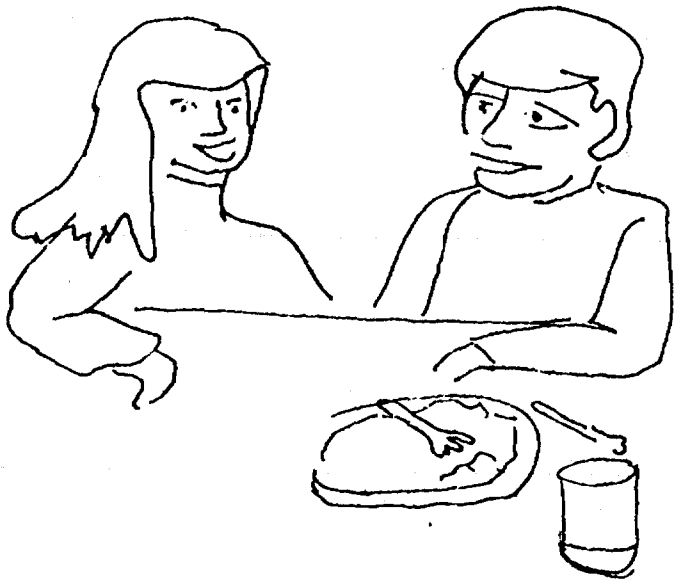

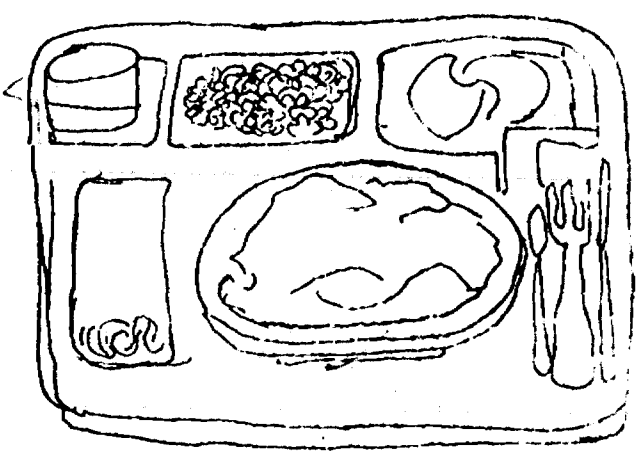

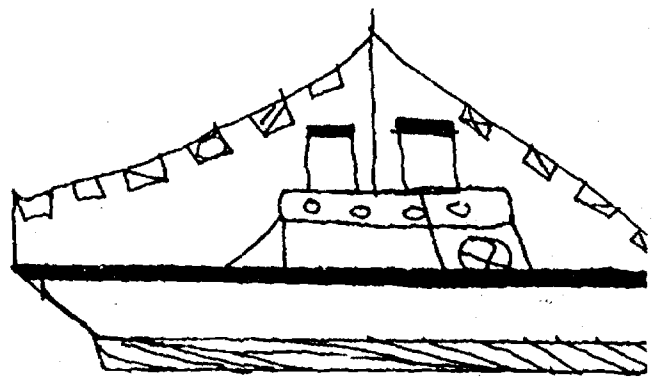

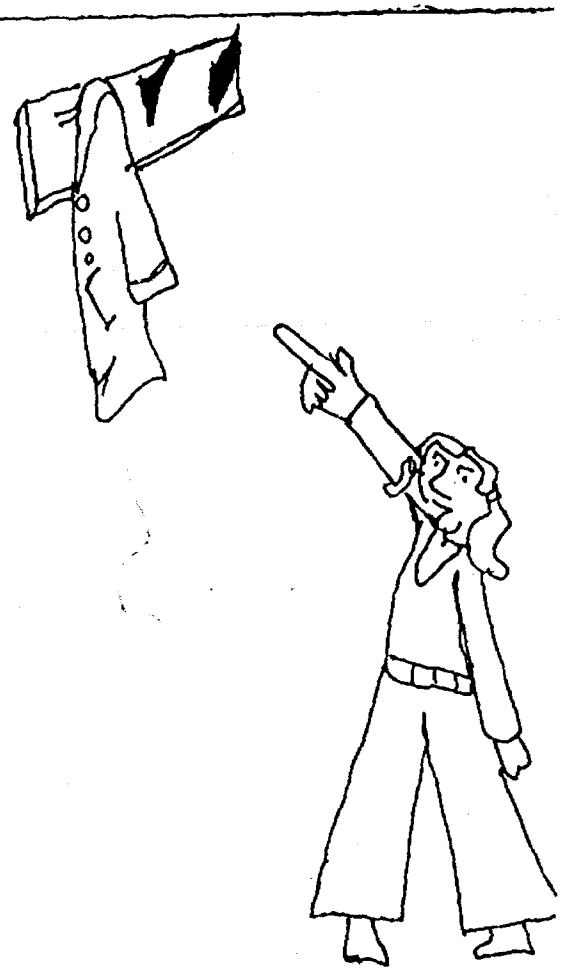

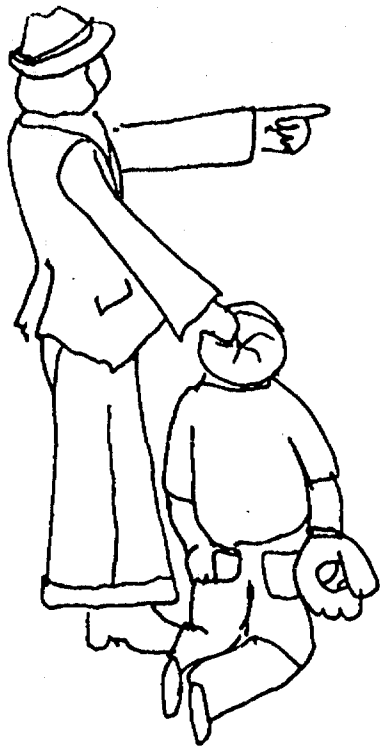

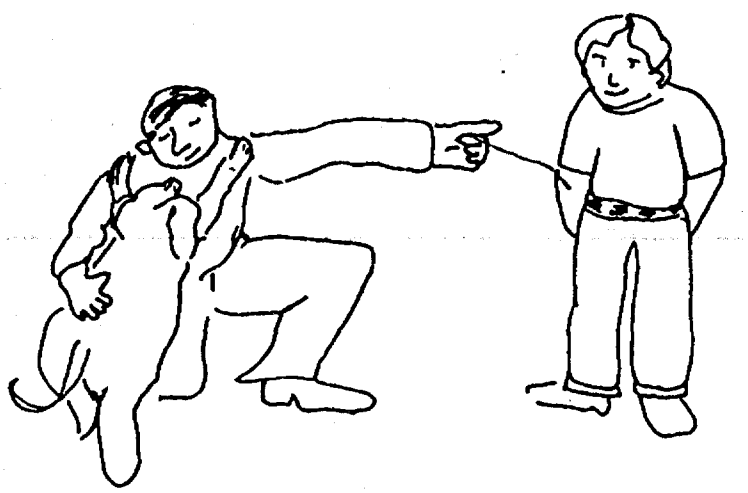

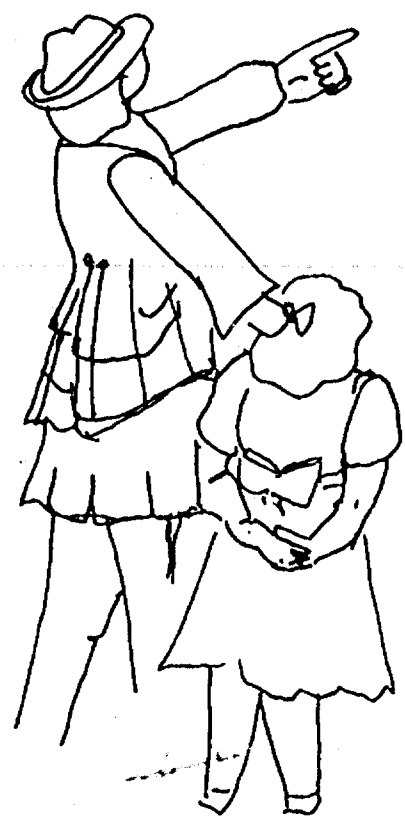

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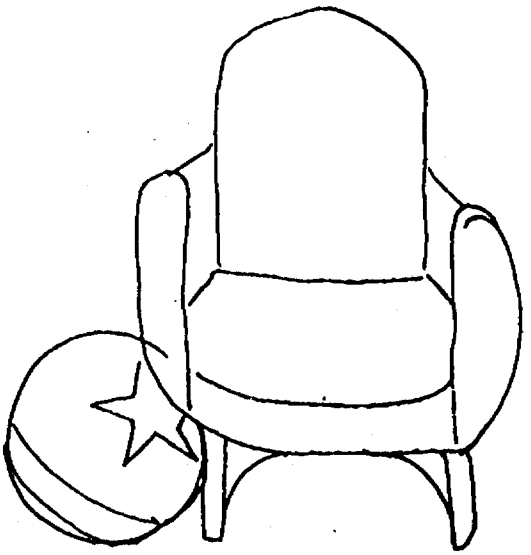

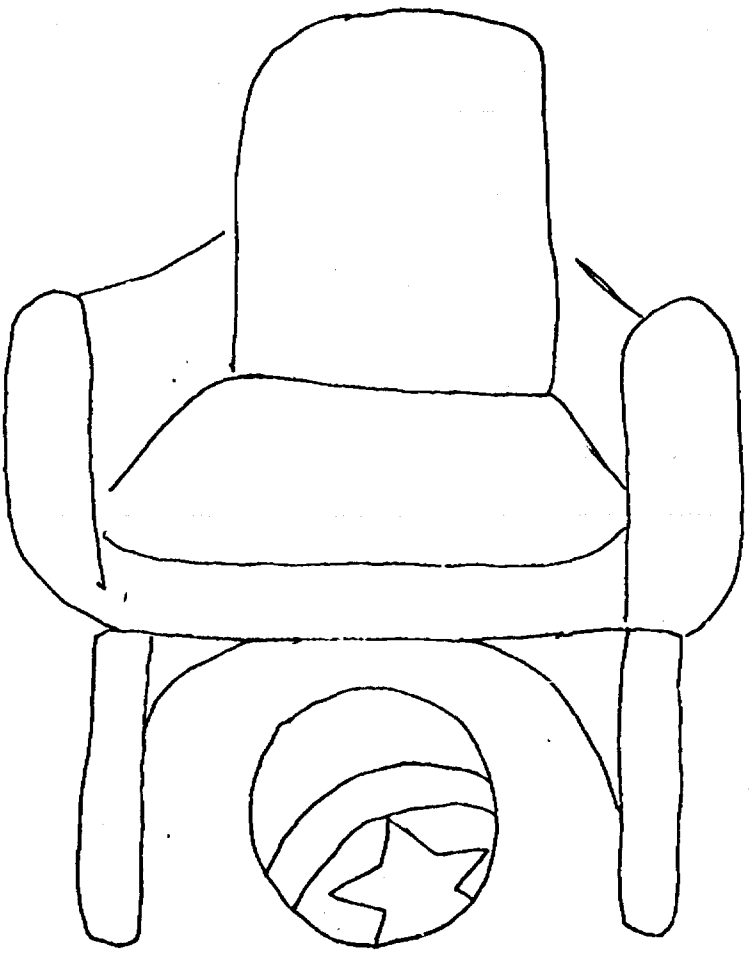

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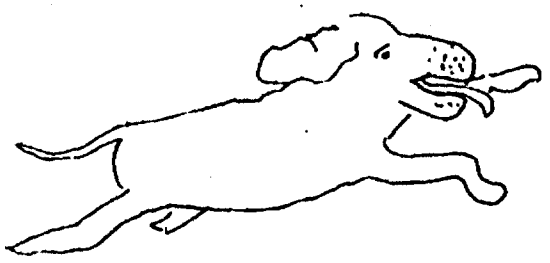

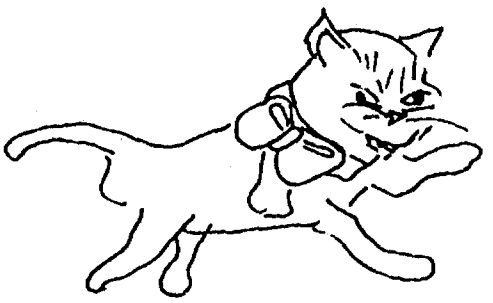

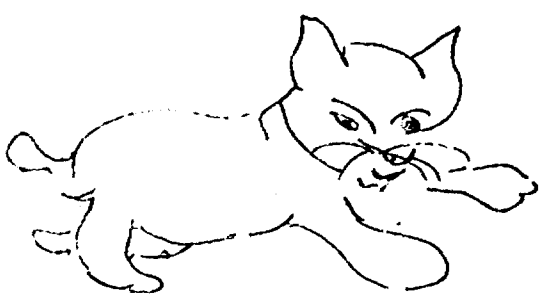

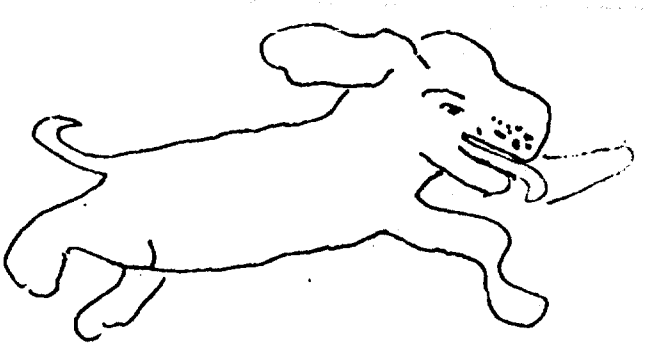

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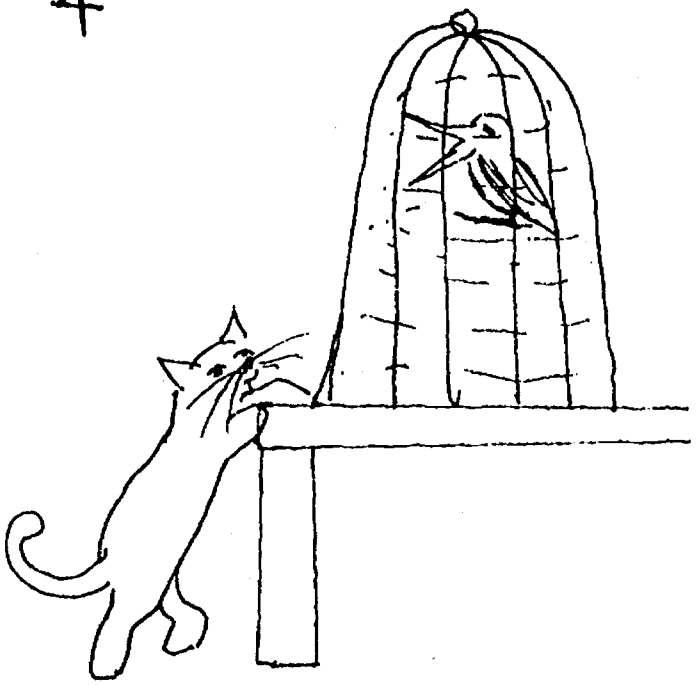

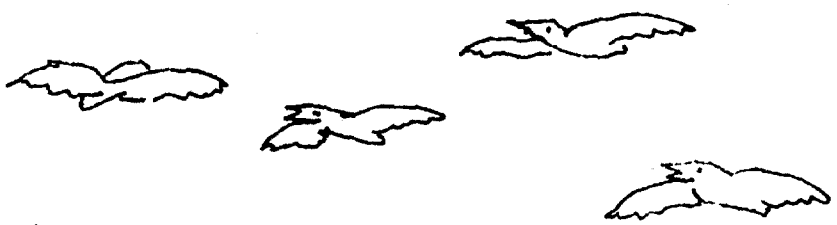

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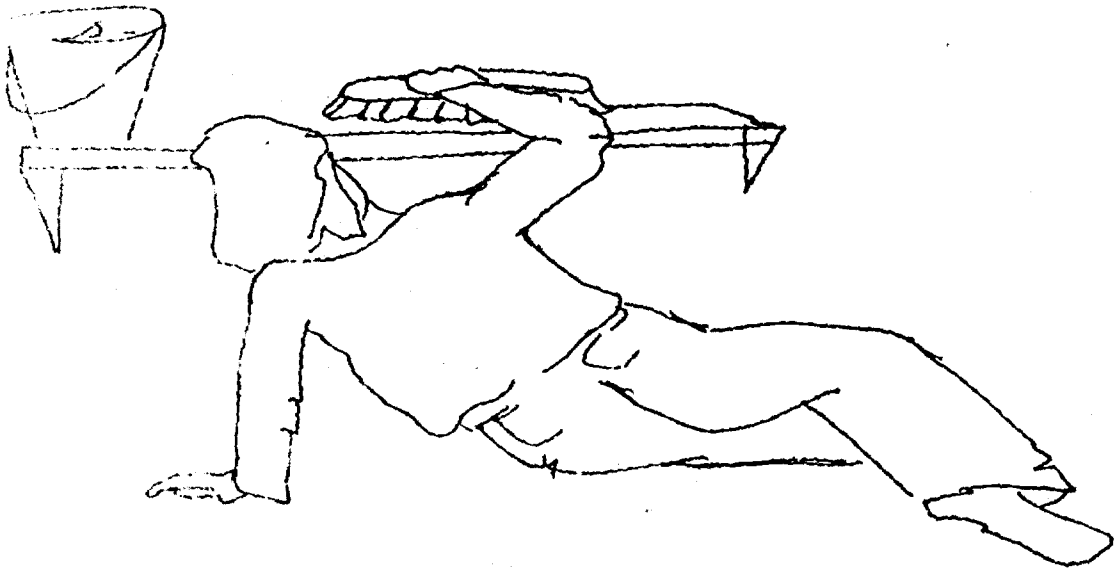

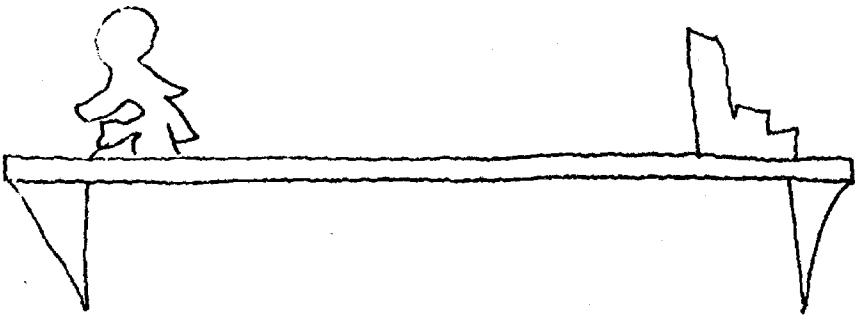

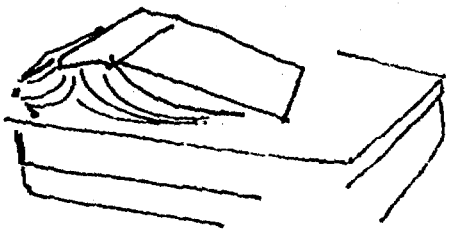

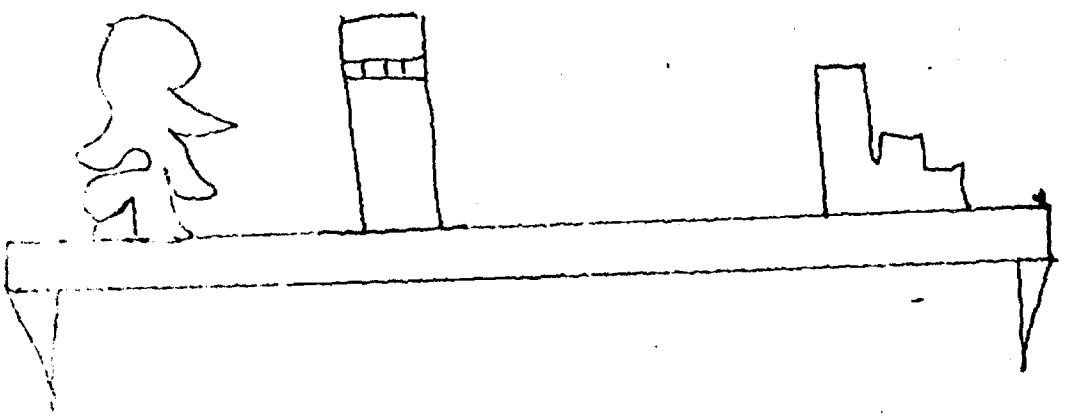

10

The Test of Cognition

Scoring Guide

Summary of Scores

Pupil: _____

Grade: _____

I. Auditory Perception (Maximum 30 points)

A. Perception of Minimal Pairs — Score

1. Recognition of Vowel Differences (10) ____
2. Recognition of Differences Between Initial and Final Paired Consonants (10) ____
3. Comparison of Medial Consonants (10) ____

Total Score: _____

B. Repetition of Auditory Stimulii (Maximum 25 points)

1. Digits (5) ____
2. Nonsense Syllables (5) ____
3. Words (5) ____
4. Phrases (5) ____
5. Sentences (5) ____

Total Score: _____

II. Visual Perception (Maximum 50 points)

A. Similarities (20) ____
B. Differences (15) ____
C. Numerical Analogies (5) ____
D. Missing Parts (5) ____
E. Visual Perception of Words (5) ____

Total Score: _____

III. Auditory and Visual Perception Syntactic Screening (Maximum 40 points)

A. Receptive (20) ____
B. Expressive (20) ____

Total Score: _____

IV. Visual-Kinesthetic (Maximum 29 points)

A. Drawing Figures (Maximum 9 points)

Circle (3) ____
Square (3) ____
Diamond (3) ____

Total Score: _____

B. Human Figure Drawing (Maximum 20 points)

Total Score: _____

TOTAL SCORE: _____

The Test of Cognition

Examiner's Record

Pupil:_____ Pupil Responded:_____ Sex:_____

Grade:_____ Pupil Responded:_____

Birth Date:_____ Pupil Responded:_____

I. Auditory Perception (Maximum 30 points)

A. Auditory Perception of Minimal Pairs
Mark "C" if correct
Mark "X" if incorrect

Recognition of Vowel Differences (10)

1.	fed	fed_____	6.	time	Tom_____
2.	pin	pen_____	7.	steer	stare_____
3.	main	men_____	8.	new	new_____
4.	boy	boy_____	9.	tour	tore_____
5.	mad	men_____	10.	book	balk_____

Score:_____

Recognition of Differences Between Initial and Final Paired Consonant Sounds (10)

1.	three	free_____	6.	their	they_____
2.	ran	ran_____	7.	missed	missed_____
3.	it's	it_____	8.	lake	bake_____
4.	your	you_____	9.	tool	too_____
5.	moon	noon_____	10.	I'll	I'll_____

Score:_____

Comparison of Medial Consonants (10)

1.	mother	mother_____	6.	tested	tested_____
2.	meshing	messing_____	7.	walked	walked_____
3.	sending	sending_____	8.	nothing	nothing_____
4.	taking	taping_____	9.	waiting	waking_____
5.	telling	telling_____	10.	testing	tessing_____

Score:_____

B. Repetition of Auditory Stimuli (Maximum 25 points)
Mark "C" if correct
Mark "X" if incorrect

TOTAL SCORE:_____

1. Digits (5)

a. 4 - 7_____
b. 6 - 4 -- 1_____
c. 4 - 2 - 1 - 3_____
d. 3 - 1 - 8 - 5 - 9
e. 4 - 7 - 3 - 8 - 5

Score_____

2. Nonsense Syllables (5)

a. wep_____
b. tepper_____
c. luppering_____
d. flufferingly_____
e. tifferinglier_____

Score_____

3. Words (5)
   a. girl_____
   b. mother_____
   c. neighbor_____
   d. valley_____
   e. armadillo_____

Score:_____

4. Phrases (5)
   a. a glass of milk_____
   b. going home later_____
   c. a yellow school bus_____
   d. the boy with the blue sweater_____
   e. the door with the exit sign_____

Score:_____

5. Sentences (5)
   a. The boy walked fast._____
   b. She has five cents to spend._____
   c. My sister Mary is going to come home._____
   d. Tell him to come into the room._____
   e. I promise to try to do it._____

Score:_____

TOTAL SCORE:_____

II. Visual Perception (Maximum 50 points)

A. Similarities (20)
Circle the letter the child indicates.

1. A.....B.....C.....D
2. A.....B.....C.....D
3. A.....B.....C.....D
4. A.....B.....C.....D
5. A.....B.....C.....D
6. A.....B.....C.....D
7. A.....B.....C.....D
8. A.....B.....C.....D
9. A.....B.....C.....D
10. A.....B.....C.....D
11. A.....B.....C.....D
12. A.....B.....C.....D
13. A.....B.....C.....D
14. A.....B.....C.....D
15. A.....B.....C.....D
16. A.....B.....C.....D
17. A.....B.....C.....D
18. A.....B.....C.....D
19. A.....B.....C.....D
20. A.....B.....C.....D

Score:_____

B. Differences (15)
Circle the letter the child indicates.

1. A.....B.....C.....D
2. A.....B.....C.....D
3. A.....B.....C.....D
4. A.....B.....C.....D
5. A.....B.....C.....D
6. A.....B.....C.....D
7. A.....B.....C.....D
8. A.....B.....C.....D
9. A.....B.....C.....D
10. A.....B.....C.....D
11. A.....B.....C.....D
12. A.....B.....C.....D
13. A.....B.....C.....D
14. A.....B.....C.....D
15. A.....B.....C.....D

Score:_____

C. Numerical Analogies (5)
Circle the letter the child indicates.

1. A.....B.....C.....D
2. A.....B.....C.....D
3. A.....B.....C.....D
4. A.....B.....C.....D
5. A.....B.....C.....D

Score:_____

D. Missing Parts (5)
Circle the letter the child indicates

1. A.....B.....C.....D
2. A.....B.....C.....D
3. A.....B.....C.....D
4. A.....B.....C.....D
5. A.....B.....C.....D

Score:_____

E. Visual Perception of Words
Circle the letter the child indicates

1. A.....B.....C.....D
2. A.....B.....C.....D
3. A.....B.....C.....D
4. A.....B.....C.....D

Score:_____

TOTAL SCORE:_____

III. Auditory and Visual Perception

Syntactic Screening

SAY TO THE PUPIL:

Receptive: I am going to tell you about some pictures I shall show you. (Say a sentence for each picture on the demonstration page, e.g., The man has a ball, etc.) Point to the picture I tell you about. (Say one sentence at a time, as the child indicates which picture is being referred to).
(Demonstrate all the receptive pictures first. The asterisk which follows one of the pairs of sentences should be elicited first from the child.)
Score: 1 for each correct indication, 2 if both are correct.

Expressive: Now I shall tell you about some other pictures, and when I point to the picture, you will tell me what I told you about the picture. (Say each of the sentences. Then the sentence with the asterisk is elicited from the child first. The examiner points to the picture, and the child tells about the picture.)
Score: 1 for each correct repetition, 2 if both sentences are correct. No errors. Errors include omissions, substitutions, additions, changes in words or in order of words, but not contractions, e.g., we're for we are.

	Receptive	Expressive
1.	The truck is on the table._____ The truck is under the table.*_____	1. The boy is drinking.*_____ The boy is not drinking._____
2.	The girl is standing.*_____ The girl is not standing._____	2. The ball is behind the chair._____ The ball is under the chair.*_____
3.	The girl sees the boy._____ The girl sees the boys.*_____	3. The dog chases the cat.*_____ The cat chases the dog._____
4.	The dog sees himself.*_____ The dog sees the shelf._____	4. The cat sees the bird._____ The cat sees the birds.*_____
5.	The wagon hits the train._____ The train hits the wagon.*_____	5. The man washes himself.*_____ The man washes the shelf._____
6.	This is a mother bird.*_____ This is Mother's bird._____	6. This is a baby elephant._____ This is Baby's elephant.*_____
7.	The boy walked._____ The boy walks.*_____	7. The girl skipped.*_____ The girl skips._____
8.	Has John finished lunch?*_____ John has finished lunch._____	8. The book is on the shelf._____ Is the book on the shelf?*_____
9.	This is my coat.*_____ That is my coat._____	9. That is my ball.*_____ This is my ball._____
10.	The man shows the boy the dog._____ The man shows the dog the boy.*_____	10. The mother brings the brother the sister.*_____ The mother brings the sister the brother._____

Level II Examiner's Record

IV. Drawing

IV. Drawing
Directions for Scoring:

A. Drawing Geometric Figures (Maximum 9 points)

1. Copying a Circle (3 points)

a. Score 3 for a completely round, closed figure.
b. Score 2 for a curved figure which must be approximately round, and closed.
c. Score 1 for a curved figure which must be approximately round and at least 3/4 closed.
d. Score 0 for any figure not meeting the above criteria.

2. Copying a Square (3 points)

a. Score 3 for a right-angled figure which is as long as it is wide, and the lines must not be broken. The right angles may be formed by lines that intersect slightly, but must not be rounded or made by drawing a corner, so that the figure has ears.

b. Score 2 for a right-angled figure which is not more than half as long as it is wide, and the lines must not be broken, but may be bowed slightly. The right angles may be formed by lines that intersect, but must not be rounded.
c. Score 1 for a right-angled figure which is not more than half as long as it is wide, the lines must not be broken but may be bowed or uneven. The right angle may be formed by lines that intersect, but must not be rounded.

d. Score 0 for any figure not meeting the above criteria.

3. Copying a Diamond (3 points)

a. Score 3 for a figure with four well-defined angles that is more diamond-shaped than square or kite-shaped. The pairs of angles must be approximately opposite, and all the lines meet to make an enclosed figure.
b. Score 2 for a figure with four well-defined angles, that is diamond-shaped, the pairs of angles are approximately opposite, but the lines may be bowed or irregular.
c. Score 1 for a figure with four well-defined angles, that is a diamond-shaped, the pairs of angles are approximately opposite, but the lines may be bowed and the lines of the figure may not be completely closed.

d. Score 0 for a figure which is too square shaped, where the shape is irregular, where the corners are rounded, where angles are not opposite each other, where sides are unequal, or which is kite-shaped.

B. Human Figure Drawing (Maximum 20 points)

1. Head
   a. Score 2
      There is a head, its general shape is oval and a vertical position.
   b. Score 1
      There is a head, but it does not resemble an oval in vertical position. May be irregular shape.
   c. Score 0
      No head is indicated.
2. Hair
   a. Score 2
      Hair is shown on head and is neatly drawn even if not shaded.
   b. Score 1
      Hair is not drawn neatly and may be crude
   c. Score 0
      No hair is indicated.
3. Eyes
   a. Score 2
      There are two eyes (one if face is in profile) and each eye has either eyebrows, lashes or pupils.
   b. Score 1
      There are two eyes (one if face is in profile) but no eyelashes, eyebrows or pupils. Give 1 point to dots or any other crude representation.
   c. Score 0
      Only one eye is indicated (in a full-face drawing), or there are no eyes, or there are more than two.
4. Nose
   a. Score 2
      There is a nose and it is shown in two dimensions.
   b. Score 1
      There is a nose shown in either one or two dimensions. Give 1 point to a dot or any crude representations of a nose.
   c. Score 0
      No nose is indicated.

5. Mouth
   a. Score 2
      There is a mouth, and 1 or 2 lips are clearly indicated.
   b. Score 1
      There is a mouth, but lips are not shown.
   c. Score 0
      No mouth is indicated, or there is only a dot where the mouth should be.

6. Neck
   a. Score 2
      There is a neck, indicated by two vertical lines, and its outline is continuous with that of the head or trunk, or both.
   b. Score 1
      There is a neck shown by either one or two lines, but it is not continuous with either the head or the trunk.
   c. Score 0
      No neck is indicated.
7. Trunk
   a. Score 2
      There is a trunk and its length is clearly greater than its width. When the trunk is clearly indicated by a single vertical line distinct from two legs, give 2 points.
   b. Score 1
      There is a trunk but its length is not clearly greater than its width. If there is no differentiation made between the head and the trunk, give 1 point to the trunk if the facial features occupy the upper half.
   c. Score 0
      No trunk is indicated.
8. Arms and Hands
   a. Score 2
      There are two arms and two hands. Hands may may be indicated in any manner. Credit 2 points even if fingers come directly from the end of the arm.
   b. There are two arms, but no hands, or only one is indicated.
   c. Score 0
      Only one arm is indicated or there are no arms or there are more than two.
9. Attachment of Arms
   a. Score 2
      Two shoulders and arms are clearly indicated (one of each if figure is in profile): the arms are two-dimensional and are attached at appropriate places.
   b. Score 1
      Arms, but no shoulders are indicated; the arms (or arm, in a profile drawing) are attached to the upper part of the trunk at approximately the correct body position.
   c. Score 0
      The attachment of both arms does not meet the above criteria.
10. Legs and Feet
   a. Score 2
      There are two legs and two feet. Feet may be indicated in any manner such as: stick legs, if toes are attached directly to legs, or if legs are hidden, but feet or shoes

are indicated.

b. There are two legs, but no feet (or only one) indicated.

c. Score 0
Only one leg is indicated (unless the figure is in profile), or there are no legs, or there are more than two.

Lit Reviews
Analyses in Progress

A Diagnostic Instrument for Evaluating the Language Ability of Children

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INTRODUCTION

The commitment of the National Right to Read Effort is to enable every American school child to become a literate citizen. Yet despite the anticipation with which children enter school, eager to learn to read, despite the efforts of school systems, administrators, and teachers, many children, particularly those from lower socio-economic levels, fail to learn. Failure begins early. Many are already retarded in reading in the first two grades.

The United States Office of Education submits the following statistics:

---One out of every four students nationwide has significant reading deficiencies.
---In large city school systems up to half of the students read below expectation.
---There are more than three million illiterates in our adult population.
---About half of the unemployed youth, ages 16-21, are functionally illiterate.
---Three-quarters of the juvenile offenders in New York City are two or more years retarded in reading.
---In a recent U. S. Armed Forces Program called Project 100,000, 68.2 percent of the young men fell below Grade Seven in reading and academic ability.[1]

Research which has attempted to explore the reading process, has been undertaken in several disciplines. One finds research reported in the journals of psychology, linguistics, physiology, neurology, and education. However, "the pieces are yet to be completed and brought together."[2] Reports in the research are often inadequate and contradictory.

The White House Conference on Children observed:

> In the absence of hard knowledge, fads and easy solutions in reading have often gained swift acceptance, but they have generally disappeared just as quickly. ....Truly adequate teaching of reading demands a foundation of research which we are only now beginning to assemble.[3]

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[1]James E. Allen, Jr., "The Right to Read---Target for the '70s," Journal of Reading, XIII (November, 1969), 96.

[2]White House Conference on Children, 1970, The Right to Read. Washington, D. C.: U. S. Government Printing Office, p. 2.

[3]Ibid., p. 3.

It is generally accepted that the factor which is critical to learning, is mastery of the production and comprehension of spoken language. Much of the literature proposes that by the age of five (the usual time for school entry), most children approach adult competence in spoken language.

Throughout the literature concerned with reading instruction from Huey in 1921[1] to Ruddell in 1970[2] one finds discussion that reading is, in effect, a progression from the spoken language of the child to the translation of written symbols back into spoken language. Stauffer is representative of current thinking:

> By the time children are of school age, the overwhelming majority of them have oral language facility sufficient to provide the foundations for reading instruction. In addition, they have had enough "experience" to provide the foundations for reading instruction purposes.[3]

The inadequate reading performance observed among many American school children has led to a growing concern that the language, which the children who fail to learn spontaneously acquire, is a major barrier to the mastery of reading. The excessive reading failure reported for disadvantaged populations has led many reasearchers to hypothesize that the disadvantaged child has not mastered language, that is the language of the school, although he does have a functioning language system. It is contended that this linguistically different system of ghetto English interferes with the acquisition of reading skills when the instructional materials and methods of teaching reading employ standard English syntactic patterns.

Cazden presented two explanations, which are currently proposed, of the school language problems of lower-class children.

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[1]Edmund Burke Huey, The Psychology and Pedagogy of Reading (New York: The Macmillan Company, 1921).

[2]Robert B. Ruddell, "Language Acquisition and the Reading Process," Theoretical Models and Processes of Reading, eds. Harry Singer and Robert B. Ruddell (Newark, Delaware: International Reading Association, 1970), pp. 1-19.

[3]Russell G. Stauffer, "Certain Psychological Aspects of Children's Learning to read," The Reading Teacher, XXII (April, 1969), 634-640.

The "deficit hypothesis" takes the position that these children have acquired less language than middle-class children. The "difference hypothesis" maintains that lower-class children have acquired language, but that that "dialect of English is so different in structureal (grammatical) features that communication in school, both oral and written, is seriously impaired by that fact alone."[1]

Williams discussed the educational strategies proposed by proponents of the two theories. Those who support the "deficit hypothesis" focus remediation efforts upon the child and his unreadiness for school. Those who support the "difference hypothesis" accuse the school of unreadiness to educate these children.[2]

Educators, searching for the causes and possible remediation of the reading failure of disadvantaged children have assumed that the child's language has a direct influence on reading achievement. The "deficit" theorists contend that disadvantaged children, linguistically deprived, need special instruction in the language of the school before they can successfully be taught to read. The "difference" theorists propose that disadvantaged children will learn to read faster and more effectively if they are taught to read from materials written in their own dialect.

One cannot assume, without substantiation, that the child who is disadvantaged is either deficient (that is, that he does not respond adequately to language) or different (that is, that he employs primarily nonstandard English syntactic patterns in his spoken language).

Although there is a dearth of definitive research exploring the language-reading relationship and researchers have repeatedly called for more and in depth investigation, school systems have instituted changes in reading instruction, a good many of which have met with failure. This is not only wasteful, but may have contributed to the frustration experienced by children with learning problems.

In order to determine instructional strategy, the teacher

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[1]Courtney B. Cazden, "The Neglected Situation in Child Language Research and Education," Language and Poverty, ed. Frederick Williams (Chicago, Ill.: Markham Publishing Company, 1971), p. 81.

[2]Frederick Williams, "Some Preliminaries and Prospects," Language and Poverty, ed. Frederick Williams (Chicago, Ill.: Markham Publishing Company, 1971), pp. 1-9.

of reading should be competent in the evaluation of a child's linguistic ability and capacity, for the mastery of learning at a particular level is dependent upon a proper match between the developmental level of the learner and the task which he encounters. The instruments currently employed in the evaluation of a child's linguistic ability are not adequate measures of the variables which are presented as the causes of reading failure. In addition, the findings of current research raise questions concerning accepted truisms, and these findings should be implemented in the construction of a new instrument which would evaluate the linguistic ability of children entering school, in order to prevent reading failure.

The following assumptions made in the literature are subject to question:

Firstly, it is generally accepted, but it is questionable, that the child of five, at school entry, has a functioning language system which approaches adult competency. Chomsky writes:

> We find that the grammar of a child of five differs in a number of significant respects from adult grammar, and that the gradual disappearance of these discrepancies can be traced as children exhibit increased knowledge over the next four or five years of their development.[1]

Chomsky found that a number of grammatical structures which are present in adult grammar were absent from the language of children until about age 10, when the child's grammar approached adult competence. Some children did not achieve this level at all.

Linguistic development, rather than chronological age (the criterion for school entry) appears to be related to reading ability. Chomsky reported "...a valid relation between reading exposure and linguistic stages exists."[2] The more mature the linguistic development of the child, the greater the potential for reading achievement. Children of the same age gave evidence of different levels of linguistic development.

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[1] Carol Chomsky, The Acquisition of Syntax in Children From 5 to 10 Cambridge, Mass.: The M. I. T. Press, 1969), p. 1.

[2] Carol Chomsky, "Stages in Language Development and Reading Exposure," Harvard Educational Review, XXXXII (February, 1972), 25.

Fryburg reports similar findings in a study undertaken with disadvantaged children.[1]

Secondly, it is assumed, but it is questionable whether the reading process merely involves the translation of the printed symbols back into speech. Caroll wrote:

> ...speaking and understanding the language is not an absolute prerequisite for beginning to learn to read; there are cases on record of children who learn to read before they can speak, and of course many deaf children learn the language only through learning to read.[2]

There are differences between the acquisition of language and the process of learning to read. We have yet to explore the ways in which knowledge of spoken language interacts with learning to read. We have yet to determine what kinds and amount of competence are necessary and desirable before the child undertakes any given task in learning to read.

Thirdly, it is currently accepted, but remains to be demonstrated that the language of the disadvantaged child is deficient and/or different and has a direct relationship to the excessive reading failure observed among disadvantaged children. Chomsky, in her study with middle-class children, found that there were middle-class children who matured linguistically at differential rates, some of whom might have been classified as deficient.[3] It has yet to be demonstrated that there is a greater percentage of deficient and/or different children among disadvantaged populations.

Fryburg found that 78% of the disadvantaged chilren she studied demonstrated linguistic ability, and these children did achieve in reading, while 22% of the children classified as deficient did not achieve in reading. Among the proficient children those who employed standard English syntactic patterns indicated the greatest gains in reading achievement. Further research to investigate the relationship between syntactic patterns and reading achievement should be undertaken.

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[1] Estelle L. Fryburg, "The Relations Among English Syntax, Methods of Instruction, and Reading Achievement of First Grade Disadvantaged Black Children," (unpublished Doctor's dissertation, New York University, 1971).

[2] John B. Carroll, "The Nature of the Reading Process," Theoretical Models and Processes of Reading, eds. Harry Singer and Robert B. Ruddell (Newark, Delaware: International Reading Association, 1970), p. 298.

[3] Carol Chomsky, The Acquisition of Syntax in Children From 5 to 10 (Cambridge, Mass.: The M. I. T. Press, 1969).

Throughout the literature of the various disciplines which have attempted to explore the language-reading relationship, there is a call for further research. The Right to Read has recommended that research should focus on the following areas:

> Investigation of the reading process; identification of its biological, linguistic, and behavioral components; and evaluation of their interaction
>
> The relationship of reading to language and language development from infancy to maturity
>
> Reading disabilities and related language problems
>
> Diagnostic methods to detect and prevent reading difficulties[1]

It is the purpose of this study to develop a series of tests designed to evaluate a child's receptive and expressive language ability. The test would be suitable for administration, scoring and interpretation in the schools. Since all beginning school instruction is dependent upon the child's ability to derive meaning from and respond to the oral language of the teacher, his linguistic capacity is a critical variable in initial academic achievement. The ability of the instrument to predict reading achievement would be explored.

This proposed exploration into the reading process has widespread implications.

It will add to our present knowledge concerning the language development of children.

It will explore the relationship of language development to reading achievement through the beginning years of school.

It will explore and provide a description of the language-reading relationship observed among middle-class and lower-class children of normal intellectual development and children of retarded intellectual development.

Primarily, it is anticipated that this test may prove to be an effective diagnostic procedure which can be employed to detect and prevent reading difficulties.

If effective instruction in reading is to be provided in American schools, it is critical that instructional procedures be based upon understanding of the characteristics and knowledge

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[1] White House Conference on Children, 1970, The Right to Read (Washington, D. C.: U. S. Government Printing Office, 1970), pp. 6-7

the learner brings with him at the beginning of his schooling. It is anticipated that the instrument which would be developed from this proposed study would shed some light on the questions researchers now ask, and add to the findings of current research.

PURPOSE, PROBLEM AND OBJECTIVES

Purpose

1. To develop a group of tests designed to evaluate a child's receptive and expressive language ability which would be suitable for administration, scoring and interpretation in the schools.

2. To employ the instrument as a measure for predicting reading achievement.

The Problem

General Statement of the Problem

What is the relationship between the language development and the reading achievement of children?

Specific Problems

1. Will children at different stages of language development indicate differential reading achievement?

2. Will children who demonstrate ability primarily in standard English indicate greater reading achievement than children who demonstrate ability in both standard and nonstandard English, or than children who demonstrate ability primarily in nonstandard English?

3. Is there a relationship between socio-economic status and language development?

4. Is there a relationship between sex and language development?

Objectives

It is hypothesized that:

1. The reading achievement scores of children will indicate a significant positive relationship to the stage of language development the child evidences as measured by the linguistic diagnostic instrument developed in this study.

2. Children who demonstrate ability primarily in standard English syntactic patterns will indicate the highest scores in reading achievement. Children who demonstrate ability in both standard and nonstandard

English will demonstrate the next highest scores, while children who demonstrate ability in nonstandard English will demonstrate the lowest scores in reading achievement of the group of able children.

3. There will be no statistically significant differences in language development between children of lower-class status and children of middle-class status.

4. There will be no statistically significant differences in language development between boys and girls.

Theoretical Rationale

The theoretical rationale for this investigation of the relationship between a child's language development and the acquisition of reading skills is derived from the research presented in the disciplines of psychology, linguistics, neurology, physiology and education. Representative viewpoints follow:

Psychology

The psychologist proposes that:

> Human society rests on man's capacity to use words. It is his use of language that makes possible the communication of meaning and the sharing of experience. These factors, in turn, enable him to establish an enduring society characterized by a distinctive culture. Language for the individual is clearly the substance of his phenomenal world. He thinks, feels and understands by means of, and within the limits imposed on him by, the content and structure of the language he speaks.[1]

In order to adapt to and manipulate his environment, it is contended that an individual must have mastered language. Church writes that, "...central to the individual's grasp of reality is the use of language and symbols."[2]

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[1]Harold Proshansky and Bernard Seidenberg, Basic Studies in Social Psychology. (New York: Holt, Rinehart and Winston, 1966), p. 235.

[2]Joseph Church, Language and the Discovery of Reality. (New York: Random House), 1965, p. 3.

It is contended that it is through language that the individual is capable of thought. Church adds:

> Through language one can manipulate the child's behavior, one can shape his objective and subjective reality, and one can, in time, induct him into a purely symbolic realm of past and future, of remote places, of ideal relationships, of hypothetical events, of imaginative literature, of values, ...and of alternative systems of symbolization such as mathematics.[1]

Jensen[2] supports the psychologists who propose that the chief agent of intellectual development is language or verbal behavior. He notes, however, that verbal behavior between social classes indicates greater differences than those of pronunciation or the use or avoidance of slang. The child's early linguistic development, he states, is affected by the social class differences. In the low socio-economic environment, there is less verbal plan and verbal interaction than there is in a middle-class environment. The spoken language of the lower classes, Jensen postulates as does Bernstein[3] is not as readily adapted to subtleties and abstractions.

The child's acquisition of language has been studied by many researchers. Ruddell presents the theoretical aspects of language acquisition:

1. Language is acquired through elaborate association and mediational learning processes.
2. Language develops as latent structures are triggered physiologically and influenced by the model language available ot the child.[4]

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[1]Joseph Church, Language and the Discovery of Reality. New York: (Random House, 1965), p. 95.

[2]Arthur R. Jensen, "Social Class and Verbal Learning," The Psychology of Language, Thought, and Instruction," ed. John P. Dececco. (New York: Holt, Rinehart and Winston, Inc., 1967), pp. 103-117.

[3]Basil Bernstein, "A Sociolinguistic Approach to Socialization: With Some Reference to Educability," Language and Poverty, ed. Frederick Williams (Chicago, Ill.: Markham Publishing Company, 1971), pp. 25-61.

[4]Robert B. Ruddell, "Language Acquisition and the Reading Process," Theoretical Models and Processes of Reading, eds. Robert B. Ruddell and Harry Singer (Newark, Delaware: International Reading Association, 1970), p. 1.

Linguistics

The linguist, Noam Chomsky, postulates that there is an innate structure within the individual which is rich enough to bridge the difference between experience and knowledge which an individual may have. This innate capacity is the quality which permits the individual to generate an infinite number of sentences and with equal facility to understand an infinite number of sentences and the messages they convey.[1]

Although the linguistic community in which the child lives influences the child's language development, he is not a phonograph, merely duplicating the sounds perceived in his immediate environment. Reed and Sawyer observe:

> Language is more an intellectual than an "environmental" or "physiological" component of the process of reading....[2]

Of the factors which comprise language, it is the syntax of the sentence which conveys meaning. Lennenberg explains:

> ...meaning is intimately related to syntax, because the meaning of the sentence is never equivalent to an unordered summation of the reference to words contained in the sentence.[3]

Brown and Bellugi studied the development of English syntax in children from the ages of 18 to 36 months. They found that the child's imitation of the mother's speech preserved the word order of her model sentences and they suggested that this preservation of order indicated that the child processed the sentences as a total construction rather than as a list of words. As the child matured they noted a progressive differentiation in the usage of words and of syntactic classes.[4]

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[1]Noam Chomsky, Language and Mind. (New York: Harcourt, Brace and World, 1968).

[2]David Reed and Jesse O. Sawyer, "Linguistic Considerations in Reading Disability," Language and Reading: an Interdisciplinary Approach," ed. Doris V. Gunderson (Washington, D. C.: Center for Applied Linguistics, 1970), p. 177.

[3]Eric Lenneberg, Biological Foundations of Language. New York: John Wiley and Son, 1967.

[4]Roger Brown and Ursula Bellugi, "Three Processes in the Child's Acquisition of Syntax," Language and Learning, eds. Janet A. Emig, James T. Fleming and Helen M. Popp (New York: Harcourt, Brace and World, Inc., 1966), pp. 3-24.

Linguistic maturity, it is generally asserted, may be evaluated by the maturity the child evidences in syntactic development. It is hypothesized that syntactic development is related to academic achievement.

Education

Worley and Story[1] report the findings of Loban, Ladd, Hildreth, and Strickland who concluded that competence in reading and writing depends to a large extent upon the child's competence in oral language, and that the best measure of maturity in a child's language is his ability to expand and elaborate sentences.

Figurel,[2] Deutsch,[3] Goodman,[4] and Smith,[5] all assert that the child whose oral language differs from the instructional language of the school will experience alienation and difficulty in learning to read.

Martin explored the relations among oral language, reading readiness and reading achievement in first grade children. He concluded that "the relationship of the oral language which was used by children to achieve reading readiness at the beginning and reading achievement at the end of first grade was virtually negligible."[6]

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[1]Stinson E. Worley and William E. Story, "Socioeconomic Status and Language Facility of Beginning First Graders," The Reading Teacher, XX (February, 1967), 400-403.

[2]J. Allen Figurel, "Language Patterns of the Disadvantaged Beginning Reader," Reading and Realism, ed. J. Allen Figurel (Newark, Delaware: International Reading Association, 1969), pp. 160-166.

[4]Kenneth S. Goodman, "Dialect Barriers to Reading Comprehension Teaching Black Children to Read, ed. Joan C. Baratz and Roger W. Shuy (Washington, D. C.: Center for Applied Linguistics, 1969), pp. 14-28.

[3]Martin Deutsch, "The Disadvantaged Child and the Learning Process," Education in Depressed Areas, ed. A. H. Passow (New York: Teachers College Bureau of Publications, 1963), pp. 163-179.

[5]K. J. Smith and H. M. Truby, "Dialectal Variance Interferes with Reading Instruction," Reading and Realism, ed. J. Allen Figurel (Newark, Delaware: International Reading Association, 1969), pp. 166-171.

[6]Clyde Martin, "Developmental Interrelationships Among Language Variables in Children of the First Grade," Elementary English, XXXII (March, 1955), 171.

Although it is contended that a child must be a linguiscally mature individual according to an elaborated (typical of the middle-class) code in order to achieve in school, the findings of educational researchers who investigated the relationship of the child's language to school achievement are obviously contradictory.

The theoretical rationale for this study is derived from the research of several disciplines: psychologists who propose that an individual's use of language and symbols is critical to his ability to manipulate his environment; linguists who hypothesize that an individual has an innate capacity to generate and understand an infinite number of sentences and educators who assert that competence in reading and writing depends to a large extent on oral language competence.

Socio-economic status and linguistic maturity appear to be related to linguistic competence and academic achievement. It is therefore hypothesized that a diagnosis of the child's linguistic competence at the beginning of his school career will discriminate the individual who is a potential learning disability.

RELATED LITERATURE

Methods of Evaluating Children's Oral Language

The early research into children's language reports that the experimenters or stenographers (e.g. Piaget[1], Brown and Bellugi[2], McCarthy[3], and Fisher[4]) wrote down the extemporaneous speech of the children they observed. This procedure was, in itself, a source of error. Articulation tests (e.g. Templin[5]), morphological forms assigned to nonsense materials (e.g. Berko[6]), extemporaneous language samples in response to realia or a standardized interview (e.g. McCarthy,[7] Labov[8], Loban[9],

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[1]Jean Piaget, The Language and Thought of the Child. (London: Routledge and Kegan, Paul, Ltd., 1959).

[2]Roger Brown and Ursula Bellugi, "Three Processes in the Child's Acquisition of Syntax," Language and Learning, eds. Janet A. Emig, James T. Fleming, and Helen M. Popp (New York: Harcourt, Brace and World, Inc., 1966), pp. 3-24.

[3]Dorothea McCarthy, The Language Development of the Preschool Child (Minneapolis, Minn.: The University of Minnesota Press, 1930).

[4]Mary Shattuck Fisher, Language Patterns of Preschool Children (New York: Teachers College, 1934).

[5]Mildred C. Templin, Certain Language Skills in Children (Minneapolis, Minn.: The University of Minnesota Press, 1957).

[6]Jean Berko, "The Child's Learning of English Morphology," Word, XIV (1958), 150-177.

[7]Dorothea McCarthy, op. cit.

[8]William Labov, Paul Cohen, Clarence Robbins and John Lewis, "A Study of the Non-standard English of Negro and Puerto Rican Speakers in New York City." New York: Columbia University, 1968. (Mimeographed.)

[9]Walter Loban, The Language of Elementary School Children. Research Report No. 1 (Champaign, Ill.: National Council of Teachers of English, 1963).

of these procedures adequately measures the child's ability to use and comprehend speech. The language samples collected by using these procedures may be biased by such variables as the personality of the child, rapport with the examiner or the interview situation.

The experiments, in their research reports, often wrote of their dissatisfaction with the techniques they employed in gathering their data. Templin[1] suggested that further study was necessary in the development and exploration of techniques used to study language.

Loban[2] employed a standardized interview in order to elicit extemporaneous language, and supplemented his oral language data with data from standardized tests. The technique for the evaluation of the subject's oral language, he felt was inadequate. He wrote that counting words alone was a crude measure because it did not reveal anything about the relationship of ideas. It was Loban's opinion that the traditional grammatical divisions of sentences did not seem to correspond to the actuality of oral language where utterances may be only phrases or single words.

McCarthy[3] observed her subjects and recorded fifty consecutive responses exactly as they sounded to the experimenter. There were times, she reported, when the mother of the child had to interpret for the experimenter. She found this to be an inadequate technique. She wrote:

> In observing children for a definite length of time, very few data were obtained from some quiet, shy subjects, while a tremendous amount was obtained from the talkative ones. It seems that it is better to compare equal samplings of children's language responses recorded in similar circumstances, even though the situation may not be exactly natural.[3]

Fisher had a stenographer record both the spontaneous and elicited responses of nursery school children. She noted

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[1]Mildred C. Templin, op. cit.

[2]Loban, op. cit.

[3]McCarthy, op. cit., p. 24.

O'Donnell, et. al.[1], Bougere[2], and Thomas[3]), samples of written language (e.g. Loban[4], O'Donnell, et. al.[5]), and word detection (e.g. Peisach[6]) were the techniques used in the study of children's language. The most frequently used method has been the standardized test of vocabulary and/or intelligence (e.g. Bereiter and Engelmann[7], Schwartz, et. al.[8], Loban[9], Templin[10], Bougere[11], and others). Some of the studies employed a combination of the techniques listed.

The analyses of the data involved counting the number of words, the average length of the sentence, the syntactic patterning of extemporaneously produced language, the syntactic patterning of written samples, or scores on the standardized tests. None

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[1]Roy C. O'Donnell, William J. Griffin and Raymond C. Norris, Syntax of Kindergarten and Elementary School Children: a Transformational Analysis, Research Report No. 8 (Champaign, Ill.: National Council of Teachers of English, 1967).

[2]Marguerite Bondy Bougere, "Selected Factors in Oral Language Related to First Grade Reading Achievement," Reading Research Quarterly, V (Fall, 1969), 31-58.

[3]Dominic R. Thomas, "Oral Language Sentence Structure and Vocabulary of Kindergarten Children Living in Low Socio-economic Urban Areas," Unpublished Doctor's dissertation, Wayne University, 1963.

[4]Walter Loban, The Language of Elementary School Children Research Report No. 1 (Champaign, Ill.: National Council of Teachers of English, 1963).

[5]O'Donnell, et. al., op. cit.

[6]Estelle Cherry Peisach, "Children's Comprehension of Teacher and Peer Speech," Child Development, XXX (June, 1965), 467-480.

[7]Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1966).

[8]Sol Schwartz, Synthia P. Duetsch and Ann Weissmann, "Language Development in Two Groups of Socially Disadvantaged Young Children," Psychological Reports, XXI (1967), 169-178.

[9]Loban, op. cit.

[10]Mildred C. Templin, Certain Language Skills in Children (Minneapolis, Minn.: The University of Minnesota Press, 1957).

[11]Bougere, op. cit.

that the greatest wource of error occurred in the transcription. Fisher hypothesized that the language unit which must be studied is the sentence, for as she noted:

> Each culture has developed standardized patterns of speech which have become a part of the social behavior of its people. Whatever may be true of casual conversation, it is hardly to be questioned that the complete and skillful expression which is the highest development of language generally implies completeness of grammatical construction. It seems reasonable, therefore, to consider increased control over the sentence one indication of increased control over language....It has...the advantage of objectivity.[1]

Fisher used the setence as the unit of analysis for the evaluation of a child's language development for she reasoned that by the age of six, normal children have acquired all the ordinary speech patterns used by the adults around them.

Fisher's work dates back to 1934 and is supported by Ruddell in 1970. He wrote that "...the child's ability to comprehend material, whether written or spoken would seem to be a function of his ability to see the relationships between key elements of the sentence."[2]

In order to evaluate the linguistic development of children, advantaged and disadvantaged, it is necessary to employ an instrument which will tap the meaning that exists in the dialectal variations within the same language. For example, the Black English speaker who says, "He go," and the standard English speaker who says, "He goes," have no difficulty understanding each other. If as some researchers have claimed, the child's language is dependent upon the early stimulation of his environment, then the child whose environment is one where Black English is used, may be linguistically mature, but in the syntactic patterns of Black English rather than a standard English syntactic pattern.

The technique which holds great promise for the evaluation of a child's linguistic maturity and measures the meaning carried

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[1] Fisher, op. cit., p. 2.

[2] Ruddell, op. cit., p. 9.

in syntactic patterns is the sentence repetition test. Tape recording the language sample controls for the source of error found in studies where speech was written down by the experimenter or a stenographer.

Laura L. Lee at Northwestern University has developed a sentence repetition test which is designed to measure the receptive and expressive use of syntactic forms. It is employed to "isolate those children between three and eight years of age who are sufficiently delayed in syntactic development to warrant further study."[1] The Northwestern Syntax Screening Test, however, utilizes only standard English sentence patterns.

Menyuk employed a sentence repetition test in her study of the perception of language by children. She correlated the findings of the sentence repetition test with samples of extemporaneous language. Menyuk wrote that if the utterance exceeded the memory span of the subject there would be certain omissions and substitutions. If however, modifications occurred, one might assume that the modifications were due to the manner in which the utterance was understood and regenerated by the listener. Menyuk concludes that:

> For the most part, children's reproduction of structures is limited by the rules that have been described to be in their grammar, since they often produce sentences with the structural descriptions found in their productions rather than those in the sentences given. In this sense, structural descritpions of the utterances they produce seem to be an accurate representation of their grammatical competence.[2]

Labov, working with disadvantaged black youngsters in Harlem, New York, also employed a sentence repetition technique for the collection of language samples in addition to tape recorded samples of extemporaneous language elicited during interview situations. The sentence repetition test he employed utilized only standard English syntactic patterns.[3]

Baratz and Stewart at The Center for Applied Linguistics developed a sentence repetition test which presents both standard English syntactic patterns and Black English syntactic patterns in parallel sentences. This test is the Education Study Center Dialect Proficiency Test.[3]

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[1]Laura Lee, Northwestern Syntax Screening Test (Boston, Mass.: Northwestern University, 1969).

[2]Paula Menyuk, Sentences Children Use Research Monograph No. 52 (Cambridge, Mass.: The M. I. T. Press, 1969).

[3]Joan C. Baratz, "Teaching Reading in an Urban Negro School System," Teaching Black Children to Read, eds. Joan C. Baratz and Roger W. Shuy (Wash., D.C.: Center for Applied Ling., 1969), 92-116.

Baratz's subjects performed in the same manner reported by Menyuk. When confronted with a sentence stimulus which was outside of their primary syntactic code, they "translated" (Menyuk used the term "corrected"), the sentence to their own syntactic code while maintaining the meaning of the sentence.

Labov, when administering the sentence repetition test to be used in his study, noted the "translation" from standard English to Black English syntactic patterns among his black subjects. He felt that the children understood standard English and translate it inot equivalent nonstandard forms.

Other investigators have noted the automatic "translation" of Black English speaking children. Ruddell noted that when a child read the sentence, "He will go," as "He go," he was consistently translating the sentence into his own dialect. He stated that this did not represent an error in reading in terms of the child's dialect and that "the child's consistent performance may thus be interpreted that he possesses a high degree of competence in the same manner as the speaker of standard English."[1] Ecroyd[2], and Wardhaugh[3], also testify to the translation of standard English into Black English by black subjects.

A sentence repetition test which presents sentence patterns in both standard and Black English holds promise as an instrument which will enable researchers and teachers to evaluate the language ability of children in terms of language meaning, an unexplored area in research dealing with the language of disadvantaged black children.

To summarize: Linguistic development, rather than chronological age appears to be related to academic achievement. The more mature the linguistic development of the child, the greater his potential for academic achievement.

There is a critical need for an instrument which can be employed to evaluate the child's linguistic development, and which will be valid for the evaluation of both standard English speaking children and nonstandard English speaking children. The sentence repetition test presents the possibility for the creation of this kind of instrument.

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[1] Ruddell, op. cit., p. 8.

[2] Donald H. Ecroyd, "Negro Children and the Language Arts," The Reading Teacher, XXI (April, 1968), 624-629.

[3] Ronald Wardhaugh, "Linguistics---Reading Dialogue," The Reading Teacher, XXI (February, 1968), 432-441.

Current Work Being Performed on Problem-Hypotheses

An instrument which will evaluate the language development of children and which will test both standard and nonstandard English syntactic patterns has been created.

The instrument has been pilot-tested with children in the kindergarten, first and second grades. The children were of lower socio-economic and of middle-class backgrounds. Boys and girls were included in the sampling. In addition, the instrument was employed in a learning disabilities clinic at a university. Again, children were of mixed socio-economic background, boys and girls of different age levels were sampled.

In regular classes in the public school, the instrument discriminated between children who gave evidence of learning disability and children who were progressing in normal patterns. At the learning disabilities clinic, the instrument was able to indicate specific areas of weakness. When teaching was directed to strengthen these areas, progress was evidenced.

Relationship of the Problem to Special Education Practice

The literature indicates that special education children show the same kind of learning curve that is evidenced by normal children. From this it has been generally accepted that basic principles applied to the teaching of normal children can be applied to children with learning disabilities. However, information about learning patterns of special education children is meager. Our current lack of information may in large part be due to current evaluative procedures.

It is proposed that the development of a group of tests designed to evaluate the child's receptive and expressive language ability will aid in the early discrimination of learning disabilities and that the tasks which the child cannot perform will serve to direct instruction.

The Sample

100 children in kindergarten,	50 lower socio-economic 50 middle-class
100 children in first grade	50 lower socio-economic 50 middle-class
100 children in second grade	50 lower socio-economic 50 middle-class
300 special education children	

Instruments and Equipment

The enclosed test will be employed.

Procedures

The enclosed test will be administered to each child individually. Standardized reading test scores will be collected.

Data Analyses Planned

Content Validity: The items that have been included in the test are similar to materials children in the first three grades encounter. They test for the ability to understand and to follow directions which frequently appear in curricular materials.

The auditory perception of language and the syntactic screening present the differences between standard and nonstandard English.

Construct Validity: A Pearson-Product Moment Coefficient of Correlation will be computed between the Boehm Test of Basic Concepts and A Test of Cognition.

Reliability: The Kuder-Richardson Formula 20 will be applied.

Hypothesis One:

The reading achievement scores of children will indicate a significant positive relationship to the stage of language development the child evidences as measured by A Test of Cognition.

Data Analysis: A Pearson-Product Moment Coefficient of Correlation will be computed between the raw scores of A Test of Cognition and the raw scores of the standardized reading tests administered in the schools as part of the usual evaluative procedure.

Hypothesis Two:

Children who demonstrate ability primarily in standard English syntactic patterns will indicate the highest scores in reading achievement. Children who demonstrate ability in both standard and nonstandard English will demonstrate the next highest scores, while children who demonstrate ability in nonstandard English will demonstrate the lowest scores in reading achievement in the group of able children.

Data Analysis:

The analysis of variance will be applied to the data. It is anticipated that significant differences will be demonstrated.

Hypothesis Three:

There will be no statistically significant differences in language development between children of lower-class status and children of middle-class status.

Data Analysis:

The analysis of variance will be applied to the data. It is anticipated that significant differences will not be demonstrated.

Hypothesis Four:

There will be no statistically significant differences in language development between boys and girls.

Data Analysis:

The analysis of variance will be applied to the data. It is anticipated that significant differences will not be demonstrated.

Problems Encountered in Developing This Study

Few problems have been encountered. As a result of the pilot study, several items were changed. However, the study has generally progressed smoothly.

Plans for its Implementation

The test is being implemented at the present time in special education projects in an urban school system for the evaluation of children who cannot be tested with standardized instruments. Data for these children will be available at the end of June, 1973.

The test will be employed with children in normal classes during May, 1973 and June, 1973. Standardized reading test scores will be collected at that time, and the statistical procedures which have been outlined will be implemented.

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