

# 4-YEAR PSYCHOLOGICAL EXAMINATION MOTOR TEST

2. NAME OF CHILD

3. DATE OF BIRTH			4. AGE	5. SEX		6. RACE		
MO.	DAY	YEAR		<input type="checkbox"/> MALE 1	<input type="checkbox"/> FEMALE 2	<input type="checkbox"/> W 1	<input type="checkbox"/> N 2	<input type="checkbox"/> OR 3
						<input type="checkbox"/> PR 4	<input type="checkbox"/> OTHER 8	

7. EXAMINED BY	8. DATE OF EXAM
	MO. DAY YEAR

## 9. GROSS MOTOR

### 1. Line Walk (2 trials)

TRIAL 1 \_\_\_\_\_ FT.

TRIAL 2 \_\_\_\_\_ FT.

COMMENTS:

PASS	FAIL
<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> 1	<input type="checkbox"/> 2

### 2. Hopping (2 trials per foot)

RIGHT FOOT: TRIAL 1 \_\_\_\_\_ HOPS      TRIAL 2 \_\_\_\_\_ HOPS

LEFT FOOT: TRIAL 1 \_\_\_\_\_ HOPS      TRIAL 2 \_\_\_\_\_ HOPS

COMMENTS:

PASS	FAIL
<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> 1	<input type="checkbox"/> 2

### 3. Ball Catch (3 trials; score + for pass, - for fail)

HANDS      ARMS

TRIAL 1 \_\_\_\_\_

TRIAL 2 \_\_\_\_\_

TRIAL 3 \_\_\_\_\_

COMMENTS:

PASS	FAIL
<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> 1	<input type="checkbox"/> 2

# 4-YEAR PSYCHOLOGICAL EXAMINATION MOTOR TEST

## 11. FINE MOTOR

### 1. Wallin Pegboard (1 trial for each hand)

NUMBER OF SECONDS

RIGHT HAND \_\_\_\_\_

LEFT HAND \_\_\_\_\_

WHICH HAND USED FIRST R \_\_\_\_\_ L \_\_\_\_\_

COMMENTS:

PASS FAIL

1  2

1  2

### 2. Copy Forms (transfer scores of those subtests given as part of the Binet; score + for pass, - for fail)

VERTICAL LINE (1 SUCCESS OUT OF 3 TRIALS):

TRIAL 1 \_\_\_\_\_ TRIAL 2 \_\_\_\_\_ TRIAL 3 \_\_\_\_\_

CIRCLE (1 SUCCESS OUT OF 3 TRIALS):

TRIAL 1 \_\_\_\_\_ TRIAL 2 \_\_\_\_\_ TRIAL 3 \_\_\_\_\_

CROSS (1 SUCCESS OUT OF 3 TRIALS):

TRIAL 1 \_\_\_\_\_ TRIAL 2 \_\_\_\_\_ TRIAL 3 \_\_\_\_\_

SQUARE (1 SUCCESS OUT OF 3 TRIALS):

TRIAL 1 \_\_\_\_\_ TRIAL 2 \_\_\_\_\_ TRIAL 3 \_\_\_\_\_

HAND DOMINANCE (check one): RIGHT \_\_\_\_\_ LEFT \_\_\_\_\_ INDETERMINATE \_\_\_\_\_

COMMENTS:

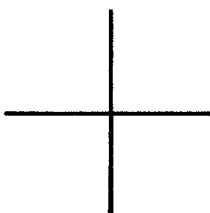
PASS FAIL

1  2

1  2

1  2

1  2



# 4-YEAR PSYCHOLOGICAL EXAMINATION MOTOR TEST

## 13. FINE MOTOR (continued)

### 3. Stringing Beads (1 trial 2 minutes in duration)

NUMBER OF BEADS STRUNG \_\_\_\_\_

COMMENTS:

PASS FAIL

1       2

### 4. Porteus Maze

MAZE IV: TRIAL \_\_\_\_\_ INCHES

MAZE III: TRIAL \_\_\_\_\_ INCHES

COMMENTS:

PASS FAIL

1       2  
 1       2

## 14. DOMINANCE

### 1. Hand

RIGHT \_\_\_\_\_ LEFT \_\_\_\_\_ INDETERMINATE \_\_\_\_\_

COMMENTS:

R L I  
 1       2       3

### 2. Leg

RIGHT \_\_\_\_\_ LEFT \_\_\_\_\_ INDETERMINATE \_\_\_\_\_

COMMENTS:

R L I  
 1       2       3

### 3. Eye

RIGHT \_\_\_\_\_ LEFT \_\_\_\_\_ INDETERMINATE \_\_\_\_\_

COMMENTS:

R L I  
 1       2       3

## 15. OVERALL SUMMARY

DOMINANCE: RIGHT \_\_\_\_\_ LEFT \_\_\_\_\_ OTHER \_\_\_\_\_

R L O  
 1       2       3

# **4-YEAR PSYCHOLOGICAL EXAMINATION MANUAL FOR THE MOTOR TEST**

(For Form PS-22)

THE COLLABORATIVE STUDY OF CEREBRAL PALSY, MENTAL RETARDATION AND  
OTHER NEUROLOGICAL AND SENSORY DISORDERS OF  
INFANCY AND CHILDHOOD

August 1963

# 4-YEAR PSYCHOLOGICAL EXAMINATION

## MANUAL FOR THE MOTOR TEST

(For Form PS-22)

**General Instructions:** The paragraphs below provide equipment specifications, administration directions, and scoring instructions for each motor test item. Typically you will be asked to record some measure of actual performance such as number of hops, beads strung, etc. When situations occur which make such scoring instructions inadequate, the following code is to be used. Use of any of these codes requires that a brief note be inserted in the scoring record.

**R — Refusal:** The child indicates unwillingness to cooperate in the task after the examiner has initiated an attempt to administer the item.

**O — Omit:** The examiner elects not to administer an item or simply forgets to do so.

In addition to scoring (recording) each item by some measure of performance or by use of one of the special codes above, a tentative pass-fail cut-score is specified for each of the items. These pass-fail criteria are to be used in evaluating motor performance for the purpose of the overall ratings required on the 4-Year Psychological Test Summary record sheet. The precise level of the cut-scores may be altered when additional Project protocols are available for analysis.

### Item 9 — Gross Motor Subtests:

1. **Line Walk:** Encourage child by word and demonstration to walk a ten-foot straight line without stepping off the line. The line should be made with three-fourths of an inch masking tape or colored plastic tape, and marked off in one-half foot intervals. Distance walked on any single trial is defined by the location of the toe of the back foot (to the nearest one-half foot marker) at the moment when the forward foot misses the line. Give two trials. Record distance walked (to the nearest one-half foot) on the best of the two trials. For summary sheet purposes, a pass consists of walking three feet or more on the best of the two trials.
2. **Hopping:** Encourage the child by word or demonstration to hop on one foot in place; and then likewise on the other foot. A hop is defined as lifting the body off the floor from a one-foot balance, and landing on the same foot. Rhythmic up and down movements of the whole body with both feet on the floor is considered a failure. Hopping on both feet together is a failure. Give two trials per foot if the child will cooperate on that many attempts. If both attempts on a given foot fail to produce at least one acceptable hop, record as NR (nonscorable response) in the comments section of the scoring record. Do not score as a refusal unless the child does not make at least one attempt on a foot. Record number of hops on the best trial for each foot separately. For summary sheet purposes, a pass consists of two hops or more on each foot.
3. **Ball Catch:**
  - a. **Equipment:** Attach a tennis ball to a length of thin, heavy-duty twine. Thread the twine through a screw-eye in the ceiling and then to a cleat or awning fastener attached to the wall. This arrangement permits the ball to swing on a string pendulum of a length determined by the examiner. Make a spot on the floor directly below the ball in its resting position, two more spots along the line of swing, four feet in either direction.
  - b. **Directions:** Adjust the height of the ball so that it will strike the child on the level of his breast plate or sternum when it swings on its arc to him, standing with his toes at one of the outside spots. (One easy way to make this adjustment is to ask the child to stand below the ball at rest and lower it to somewhere near waist level. The exact anatomical landmark will depend upon the examining room height and will have to be determined locally.) Have the child stand at one of the outside spots; the examiner, holding the ball, should stand eight feet away on the other spot. Tell the child, "CATCH THE BALL WHEN IT COMES TO YOU. READY." Release the ball and allow it to arc gently toward the child at its own speed. Give three trials. Record the method the child uses to attempt to catch the ball (e.g., on the scoring record under "hands" for hands away from body, and under "arms" for hands or arms used to trap ball against the body). Record whether the ball was caught or not by inserting a "+" or "-" in the spaces provided. Score as fail (-) if the child catches the ball by using the string, catches the ball on the return arc, or catches the ball after it has bounced off his body. Until the Project experience allows statistical analysis to determine an appropriate pass-fail cut score, the examiner must use his clinical judgment on this item for summary sheet purposes.

Item 11 – Fine Motor Subtests:

1. **Wallin Pegboard B** (square pegs): Present pegboard with pegs in place. While child is watching, remove pegs and place them on the table between pegboard and child. Offer one of the pegs to the child and note which hand he uses to reach for and grasp it for later dominance recording. Offer the child a small ball (about 1-1/4 inch diameter) to hold in his free hand. Then say, "NOW PUT THE STICKS BACK AS FAST AS YOU CAN." It may sometimes be necessary to take additional measures to insure that the child performs the task with only one hand (e.g., if he drops the ball and begins inserting pegs with both hands). Repeat procedure to secure another score for other hand, except this time place the first peg in the hand not used before and the ball in the other hand. Begin timing when the first peg touches the board and stop timing when the child removes his hand from the last inserted peg. For each hand, record time in seconds to complete replacement of all six pegs. For summary sheet scoring purposes, a pass consists of replacing all pegs in less than 30 seconds on the trial for each hand.
2. **Copy Forms:** If given as a part of Binet administration, need not be repeated at this time. Have the child make his drawings in the appropriate spaces on the Binet form. Except for the vertical line where the examiner draws the model and the cross, the other models are printed in the Binet booklet. For each form, give the child a pencil, point to the model, and say, "YOU MAKE ONE LIKE THIS. MAKE IT HERE." Give up to three trials unless a plus (+) performance is secured on an earlier trial, in which case you may stop after the successful performance. Repeat the verbal instructions for each trial. The score for each form is recorded as plus (+) if the child has copied that form satisfactorily on one of the three trials allowed him. Otherwise record his score as minus (-) for that form. Use the Binet scoring standards except for the cross, for which standards may be found on page 181 of Rachel Stutsman's Mental Measurement of Preschool Children.
  - a. **Vertical Line:** Draw a vertical line then give the child a pencil and say, "YOU MAKE ONE LIKE THIS. MAKE IT HERE." Only one demonstration. Give up to three trials if necessary.
  - b. **Circle:** Give the child a pencil and, pointing to a circle in the booklet say, "MAKE ONE JUST LIKE THIS. MAKE IT RIGHT HERE." Do not allow the subject to trace the model.
  - c. **Cross:** Model is printed on the fine motor record form. Give the child a pencil and say, "MAKE ONE JUST LIKE THIS. MAKE IT RIGHT HERE." Give three trials if necessary. (Scoring models, page 181 by Rachel Stutsman, Mental Measurement of Preschool Children.)
  - d. **Square:** Give the child a pencil and say, pointing to the square in the booklet, "MAKE ONE JUST LIKE THIS. MAKE IT RIGHT HERE." Do not allow the subject to use the side of one square for part of another, or to trace the model.

For summary sheet purposes, a pass on copy forms consists of a plus performance on three of the four items.
3. **Stringing Beads:** Use bead-stringing material and instructions from the Binet. Begin timing when the child touches the first bead to the end of the string. Record the total number of beads strung in two minutes. For summary sheet purposes, a pass consists of more than six beads strung in the two minute period.
4. **Porteus Maze, Level IV, Cross, Vineland Revision Form, Psychological Corporation:** Place the cross in front of the child and say, "LET'S SEE HOW GOOD A DRIVER YOU ARE GOING TO BE WHEN YOU GROW UP. LET'S PRETEND THAT THIS PENCIL IS AN AUTOMOBILE AND THAT THIS IS THE ROAD (pointing.) HERE ARE THE SIDEWALKS (pointing to the double lines). I'M GOING TO SEE IF YOU CAN GO ALL THE WAY AROUND WITHOUT GETTING OFF THE ROAD OR HITTING THE SIDEWALKS. WATCH FIRST AND SEE HOW I DO IT." Take a pencil and draw around the cross very slowly, using about 20 seconds to complete the drawing. Then give the child another test blank and say, "NOW LET'S SEE YOU DO IT. BE VERY CAREFUL. STAY ON THE ROAD ALL THE TIME." Measure and record total distance to nearest one-fourth inch that the child's drawn line falls outside of the road. Give no penalty for just touching the boundary line; only measure when child's line falls outside the boundaries. If the child's line falls outside the outer cross boundaries, measure the length of that deviation along the outer boundary line. If the child's line falls inside the inner cross boundaries, measure the length of that deviation along the inner boundary line. Individual deviations should be measured to the nearest one-sixteenth inch. For summary sheet purposes, a pass consists of a total of 1-1/2 inches or less outside the boundaries. If failed, administer year III Maze.

Item 11 – Fine Motor Subtests. (Cont.)

Year III (Diamond) Directions: "LET'S TRY ANOTHER ONE. BE SURE NOT TO HIT THE SIDEWALKS." Do not demonstrate. Give one trial only. Scoring: same as Year IV Maze. Passing score: total of 1-1/2 inches or less outside the boundary line.

Item 13 – Dominance:

1. **Hand Dominance:** Hand preference on two separate activities is observed and recorded to establish the hand dominance score.
  - a. **Pegboard:** Note and record which hand (L or R) child uses to reach for and grasp the first peg presented to him.
  - b. **Copy Forms:** Note which hand the child uses in copying the forms. If both used alternately, note this in marginal comments but record which hand was used (L or R) the majority of the time.

Finally, record a total hand dominance score as left (L), right (R), or indeterminate (I). Using the same hand on all three subitems would qualify for a total hand dominance score of left or right. Otherwise the total score would be recorded as indeterminate.

2. **Leg Dominance (ball kick):** Place a volley ball (or beach ball of approximately the same size) on the floor in the child's midline. Tell the child to "KICK THE BALL." Record leg dominance as left (L) or right (R) or indeterminate (I).
3. **Eye Dominance** Use a shoebox with an object in it. Cut a hole one inch in diameter at one long end of the shoebox. Say to the child, "LOOK THROUGH THE HOLE AND TELL ME WHAT YOU SEE." Give only one trial. Note which eye he uses to look through the hole.

Suggested Rules for Classification of Motor Behavior for Summary Sheet Purposes:

Gross Motor: Normal — Passes two or more of the gross motor subtests.  
Suspect — Passes only one of the gross motor subtests.  
Abnormal — Passes none of the gross motor subtests.

Fine Motor: Normal — Passes three or more of the fine motor subtests.  
Suspect — Passes only one or two of the fine motor subtests.  
Abnormal — Passes none of the fine motor subtests.

It should be noted that these are "suggested" rules for classification and should be supplemented or modified wherever the clinical observations of the examiner indicate the need for such action.