

NUMBER 13

---

# THE LEITER INTERNATIONAL PERFORMANCE SCALE

By

RUSSELL G. LEITER, M.A.

Research Assistant in the Psychological Clinic  
The University of Hawaii

with an Appendix by

STANLEY D. PORTEUS, D.Sc.

Professor of Clinical Psychology and Director of the  
Psychological Clinic, The University of Hawaii



UNIVERSITY OF HAWAII BULLETIN

---

VOL. XV, NO. 7

MAY 1936

---

The University of Hawaii Bulletin is issued once in each of the



the tests that when two tests are subjected to the same criterion and pass equally well it makes little difference which test is used.

### **General Directions for Applying the Leiter International Performance Scale.**

1. It will be found that the time required for application will be greatly shortened if the examiner will prepare the next test while the subject is still working. All that is necessary in this preparation is to select the appropriate frame, that is, the frame with the right number of notches (this has been indicated in the description following the name of the test on the scoring sheet) put on the appropriate strip, and place the blocks that are to be matched near the frame on the table. As soon as a test is completed the frame is removed and the material for the next test slipped into position before the subject. Since no explanation is necessary the examiner may then lift the frame and return the blocks of the completed test to their places in the cabinet. This is an advantage in the test situation for if the examiner is engaged in these tasks the subject is not disturbed by the examiner's close supervision and attention. In fact the examiner should be very much engaged in his work and leave the subject to his own devices. In this way the subject is not likely to look to the examiner for help.

These items of procedure are extremely simple but are time saving. The actual time taken in applying the test usually averages about fifteen minutes.

2. The entire series of tests should be given to each subject except when the examiner is absolutely certain that the subject will not be able to gain further credit.



3. From year five to year ten each test receives six months credit. Above year ten each test receives one year credit. Above year ten each test receives one year credit.
4. The illustrations on pages 34-42 show the position in which test material should be placed before each subject. Unless otherwise stated in the directions for each test, however, the blocks should be placed near the lower right hand corner of the form board.
5. The examiner must be sure that the blocks are well mixed before the subject sees them. It is best to mix them when they are put away after each test is given.
6. The test material should be left before the subject until he is definitely finished with it. It should never be taken away before he looks up. This is usually the best indication that he has finished. On the other hand to leave it after he looks up may cause him to think that he has made an error and he will begin work on the test again.
7. In a very few cases the examiner starts the test by placing the first block. These cases are noted on the scoring sheet. Other than in these cases absolutely no help should be given the subject.

### The Scoring Sheet.

The scoring sheet, in addition to being a record of the subject's response to the test material, also describes each test and gives any special directions for its application. This makes the use of a manual of directions unnecessary. Following the conventional heading the arrangement of the scoring sheet is as printed here:

#### TESTS FOR YEAR FIVE

1. **Matching Forms.** Use the seven notch frame for the test. Seven of the simpler of the Kuhlmann forms are used. The seven forms on the strip and the seven forms on the blocks are identical. The subject is expected to place like forms together.
2. **Picture Completion.** Use the five notch frame for this test. Five colored pictures have been so cut and mounted that the upper halves are on the strip above the notches and the lower halves are on the blocks. The subject is expected to place the blocks in the notches where they will complete the picture on the strip. The examiner should give the subject an idea of how to go about the solution of this test by completing the picture of the ball over the first notch.

#### TESTS FOR YEAR SIX

1. **Color-Form Test.** Use the eight notch frame for this test. The strip has on it orange and green squares and triangles each

figure has  
tical con  
child mu  
these ele  
of the b  
up, does  
2. A  
are draw  
a girl's  
hat, a s  
to place  
the notc  
are wor

1. S  
test has  
small or  
hand er  
squares  
the sm  
circle ar  
to the s

2. N  
the stri  
made u  
The blo  
are fou  
circle c  
strip.  
position

1.  
strip a  
a butte  
a frog,  
upon t  
basis o  
cated ;  
going  
sects #  
2.  
two fo  
This s  
are m  
notche  
X bloc  
the se  
be giv  
the st

figure having on it either one or two blue dots. The blocks have identical combinations on them. This makes three things which the child must match: form, color, and number of dots. All three of these elements must be correct in each notch. However, the position of the block, i.e., whether it is side ways, upside down, or right side up, does not affect the score.

**2. Association by Use.** Use the five notch frame. On the strip are drawn the pictures of a hand, a man's head, a foot, a baby, and a girl's head. The blocks contain the pictures of a glove, a man's hat, a shoe, a baby's dress and a girl's hat. The subject is expected to place the blocks containing the pictures of articles of clothing in the notches underneath the particular part of the body where they are worn.

#### TESTS FOR YEAR SEVEN

**1. Size Gradations.** Use the five notch frame. The strip for this test has drawn on it a series of circles of increasing size from a small one on the left hand end to the largest of the series on the right hand end. The blocks have drawn on them an analogous series of squares. The subject is expected to place the smallest square with the smallest circle and the next larger square with the next larger circle and so on until the series of squares in the notches are analogous to the series of circles on the strip.

**2. Matching Two-Color Circles.** Use the six notch frame. On the strip are mounted six circles one inch in diameter. Each one is made up of two colored halves, the division being on the vertical. The blocks for this test have the same kinds of circles on them as are found on the strip. The task set the child is to find the two-colored circle on the block which will match the two-colored circle on the strip. The correctness of the selection of the block and not the position in which it is placed in the notch determines the score.

#### TESTS FOR YEAR EIGHT

**1. Animal Classification Test.** Use the five notch frame. On the strip are drawn the pictures of a bird, a cow, a crocodile, a lion, and a butterfly. On the blocks are drawn the pictures of an owl, a horse, a frog, a tiger, and a bee. It will be seen that the five animals drawn upon the blocks can be matched to the five drawn on the strip on the basis of their habitat. The two birds going together, the two domesticated animals going together, the two wild animals going together and the two insects going together.

**2. Completing a Series.** Use the eight notch frame. There are two forms for this test. The strip for the first one is marked VIII-2 A. This strip is placed on the frame first. The first five notches only are marked. The marks are X O X O X O X. The remaining three notches are blank. The blocks that go with this strip are four of the X blocks and four of the O blocks. If the subject is able to complete the series in the unmarked notches the second form or form B should be given. The strip for the second form is marked VIII-2 B. As on the strip for the first form, only the first five notches are marked. The



marks are — X — X —. The blocks that go with this strip are five X blocks and four — blocks. If the subject is now able to complete this form also he is given credit for the test. Both forms must be correct to receive credit. Auto-criticism on this test is only possible when just enough of the proper blocks are placed before the subject is able to complete each form correctly. All of the X, O, and — blocks should not be left out for the subject to choose from.

#### TESTS FOR YEAR NINE

1. **Completing a Series.** Use the eight notch frame. This test is a continuation of the VIII-2 test and must be preceded by it. Again two forms are used. The strip for the first form is marked IX-1 A. Only the first four notches are marked. The marks are: O — X O. The remaining four notches are blank. The blocks that go with this test are those that were used with the VIII-2 test. Here too, only enough blocks to complete each form correctly with no left over blocks, three — blocks and two X blocks. If form A is done correctly go on to form B. Use the strip marked IX-1 B. The same blocks are used for form B as were used for form A. If form B is passed also, credit is given for this test.

2. **Recognition of Age Differences.** Use the five notch frame. On the strip are pasted five half tone photographs one inch by one and one fourth inches of five different African native females at different stages of growth. On the left hand end there is a baby. The second picture is that of a girl of about twelve years; the third picture is that of a young woman of about twenty-two; the fourth is that of a middle-aged woman of about forty-five; and the fifth is the picture of an old woman of about seventy years. On the five blocks are the half tone pictures of five African native males of analogous ages. The subject is expected to recognize the age differences in each series and to see that the blocks can be matched to the pictures on the strip on a basis of age.

#### TESTS FOR YEAR TEN

1. **Matching Shades of Grays.** Use the eight notch frame. One inch gray paper squares of the eight standard shades of gray are mounted on the strip. The blocks have the same shades of gray as them. The test problem involves the careful comparison of each shade on the strip with each block until the exact duplicate is found.

2. **Matching Forms (Advanced).** Use the five notch frame. This test is an adaptation of Test 2 in the Detroit First-Grade Intelligence Test devised by Anna M. Engel. The forms should be arranged before the subject in the order shown in the illustration of this test, i.e., the blocks are scattered at random on the testing table. The forms have not been altered. The writer has merely made a performance test out of this material. The test locates at a higher year level in the Leiter scale due to the elimination of instructions and the additional requirement that all forms must be correctly matched in order to receive credit. The examiner places the first and easiest form for

the subject. No help is given after this. The subject must fill the other four notches correctly by himself if he is to receive credit for the test.

#### TEST FOR YEAR ELEVEN

1. **Line Completion Test.** Use the eight notch frame. The strip has a heavy black line on it that drops down to each of the eight notches at varying angles and is broken and incomplete until one of the complementary blocks is placed in the notch to complete it. The examiner should see that all of the blocks face the right way; otherwise the nature of the task is not clear. Sometimes the subject gets the idea that he is to match the angles of the line above and not to complete it. This may even happen after the placing of the first block by the examiner if the blocks are turned around. After the material is in proper position the examiner places the first block in notch one (the blocks for notch one and eight are the same) and runs his pencil or forefinger over the line to show that it is complete. To children this is much the same as completing a railroad track. After this the subject is left to his own resources. It is well to note the type of response on this test, i.e., whether the child goes about the task by a trial and error procedure or whether he does it by insight.

#### TEST FOR YEAR TWELVE

1. **Matching Footprints Test.** Use the eight notch frame. This test is adapted from the Porteus Footprints test. Eight footprints of Australian aborigines are mounted on the strip above the eight notches. The same footprints appear on the eight blocks that make up the balance of the test material. The subject is expected to match the pictures on the blocks with those on the strip.

#### TEST FOR YEAR THIRTEEN

1. **Dot Estimation Test.** Use the eight notch frame. This test is an adaptation from the Porteus Dot Estimation test. The strip has a square drawn over the first notch which contains fifteen dots and a square over the eighth or last notch which contains seventy dots. The intervening spaces are blank. The blocks have the following numbers of dots on them: 15, 20, 25, 30, 40, 50, 60, and 70. The task set the subject is to arrange the masses of dots in order from least to most. The arrangement of the dots on the strip makes this task self evident and no help is necessary. The number of dots on each block is written on the under side. The subject should not be allowed to examine these numbers.

#### TEST FOR YEAR FOURTEEN

1. **Association on a Basis Superior to Use.** Use the six notch frame. The strip has the drawing of a glass bottle, a pair of scissors, a wooden block, a tree, a book, and a bird on it. The blocks contain pictures of a glass, a penny, a chair, a flower, an envelope, and a cow. At the six year level we found that children could match by associating the article with its use. At eight years two articles of similar uses could be placed together. Here a higher type of response is required as these articles will not match up by these principles.



### TEST FOR YEAR FIFTEEN

1. **Opposites Test.** Use the six notch frame. Drawn on the strip are: a circular arrow, a one-inch white square, an African native woman, an L, a small square, and a straight arrow. Drawn on the blocks are: a circular arrow in reverse from the one on the strip, a black square, an African native man, an L in reverse, a small circle, and a straight arrow. The figures and pictures on the blocks are all the reverse of those on the strip. When the blocks are placed before the subject the straight arrow should be held in a vertical position at the right end of the frame by the examiner until the first five notches have been filled. During the time that the subject is working on the first five notches the examiner may give any help that may seem necessary. The test is scored right or wrong entirely on the position of the arrow in the last notch. Here the arrow must be placed so that it is pointing in the opposite direction from the one on the strip. If the subject gets the idea of the test and sees that all of the first five notches have been filled on the principle of opposites he will of course be able to place the straight arrow in the proper position.

### TEST FOR YEAR SIXTEEN

1. **Position Analogy Test.** Use the seven notch frame. This test is an adaptation of the Ableson test found in the Army Alpha test. The seven drawings on the strip of the overlapping square, triangle, and circle, are identical in all respects save the location of the dot, which appears in seven different locations. The blocks have identical combinations of square, triangle, circle, and dot but the triangles vary in shape thus causing the subject to soon find out that form matching is not the principle by which the test can be put together.