

MANUAL

Tactile Assessment of Performance (TAP)

performance scale subtests for students who have no vision

five subtests designed to serve as adjuncts to verbal scales

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Important Points to Remember

1. The TAP is designed to be administered as an adjunct measure to a verbal scale. It should never be administered in isolation. The norms are derived from a sample of those students who were evaluated in both domains. As total blindness is an extremely low incidence disability, norm groups do not reach the sample sizes expected for optimal age comparison. Therefore, it is to be used as a supplement to other measures of ability. A multi-measure, comprehensive battery is advised.
2. The TAP is intended for use with tactile learners only. The sample was drawn from a population with no sight. An S with even a small amount of vision will try to use sight in coordination with touch. If unsure, E may hand S a thick, black marker and ask him/her to draw a simple geometric figure. If S looks at the paper in any way while drawing, he/she is not eligible for TAP assessment. In general, those Ss listed as having light perception or less are good candidates. If the S says he/she has vision, it is good practice to verify. Ask the teacher of the visually impaired for access to an eye report.
3. Because tactile stimuli differ greatly when compared to visual and pictorial displays, the TAP is not comparable to performance scales in other batteries. Only one subtest, Tactile Block Design, is a direct analogue to a traditional performance scale measure. Object Coding is a derivation. The other subtests reflect differences between tactile and visual displays (2-dimensional pictures in contrast with 3-dimensional objects).
4. Due to limited sample size, and without a random sample, no performance (TAP) IQ can be derived. The results of the 5 subtests are reported as rough age equivalents. Age groups are larger than those seen in other kits designed for use with sighted Ss to account for sampling with a population that is unusually variable in ability, experience and background. Means and standard deviations provide a comparison between this particular group of tactile learners and the individual S being evaluated.
5. The TAP scaled score interpretations are probably less robust than those for sighted Ss. The 200+ Ss in the standardization sample were seen over a period of about 35 years, and represent <10% of the total research N (in my studies) of visually impaired Ss. Most Ss of the more than 2,000 Ss studied have some vision or have serious complicating secondary disabilities that render application of the TAP impossible. On average, a school psychologist will see <5 such students (unless at a specialized school for the blind) in his/her career. For those 5, the TAP will supplement any verbal measures with performance data, and will provide greater clinical insight.
6. Findings about time spent on each item proved uneven, as there is wide variability across Ss. Examination of tactile displays differs greatly from visual scanning. For each subtest other than Tactile Block Design (bonuses were given for rapid completion), timing is needed to determine efficiency. Object Coding revealed significant interactions with ability, yielding an efficiency standard score. The record form provides mean times for the other subtests for comparison with the norm sample.
7. Use of a silent stopwatch for timing is recommended. The S may be sensitive to sounds in the environment. Try to find a quiet place for assessment. A ticking clock may be more distracting to a child who does not see than to one who does. Allow the S to examine the stopwatch at the beginning of the session if he or she has never seen one.

8. Clinical observation during administration of the TAP is essential. The subtest called Situations is one for which experience in the real world is required. Age gradients do not always reflect experiential learning, so scores are to be balanced with hypotheses as to what the child can do and under what circumstances. All psychological measurement is a sample at one place and at one point in time, and Ss without sight may not have had exposure to various elements of the environment. Inferences are less predictive in this population. Scores are meant to result in meaningful interpretation and recommendations, those that lead to wider experiences and enhanced learning.
9. Ancillary assessments are recommended. Each measure complements the others. Owing to the complexity of cognitive growth without vision, it is necessary to administer an array of measures to obtain a comprehensive view of current skills and potential future function, including standardized and informal methods.
10. If you are new to interaction with a student who is totally blind, do not refrain from using visual terms. For example, when handing the student a block for Tactile Block Design, follow the directions that say, "Look at this block." Students who are visually impaired are used to this practice, and substitute their way of looking for that employed by people who are sighted. In contrast, minor adaptations in language have been suggested for verbal items, such as substituting "...smell smoke or fire" for "...see smoke..." on one common Comprehension item.
11. Be prepared to spend far more time with each TAP examinee than you would with his or her sighted counterpart. Each subtest takes longer to administer than performance measures that employ vision, as scanning by sight is a more rapid process, especially when pictures are included. Tactile exploration is serial in nature, so that additional time is often needed to follow specific directions. Ss may also need extra seconds to gain a gestalt on those items that require specific or complex form recognition.
12. Seek the assistance of the local teacher of the visually impaired (TVI), preferably the one who is responsible for the education of the individual S you will be evaluating. The value of a resource gained from teaching youngsters who are blind (who read using alternatives to print) cannot be overstated. Background material, as requested on the face sheet of the record form, including the educational history of the S, is essential. If possible, conduct an interview with parents or caregivers to elicit information prior to the assessment. Standard measures help parents report their own observations and provide data about home activities. A final interpretive session is advised.
13. Apply your knowledge of all children to the S in question. Blindness, in and of itself, does not impair development. The TAP Ss are children first, visually impaired learners second. While the methods of instruction may differ, the education of all youngsters requires motivation, acquisition of content, retrieval of relevant actions or information, and development of automaticity in response to learned material. These aspects of cognitive behavior occur using print, braille, auditory or electronic texts.
14. Practice with the kit before you appraise a student. Some of the hand skills needed to quickly present small materials may be new to a psychologist familiar with larger, less cumbersome ones, such as in the Bayley Scales. Some Ss may try to touch each thing before the E is ready. It is sometimes helpful to give the S a small toy or object to hold in his/her hands while waiting for the E to prepare an item.
15. **RELAX! THE TAP SUBTESTS ARE MEANT TO BE ENJOYED BY BOTH E AND S!**

Subtest 1: Tactile Block Design

Materials

Set A: 10 flat tiles (1½" X 1½"), six are smooth on one side and rough on the other; four are smooth on one side and diagonally divided between smooth and rough on the other

Set B: 4 blocks (1½" cubes) with two smooth sides, two rough sides, and two sides diagonally divided between smooth and rough; 9 design plaques (3" X 3") to be assembled with the blocks

Start

Start at Item 1 for Ss <8 years (age or suspected function). If any items (either trial) of set A are passed, E proceeds to administer Set B after completing Items 1-4.

Start at set B, Sample Item (marked S) for Ss >8 years (age or suspected function). If both trials of the Sample Item or both trials of Item 5 are failed, E administers Set A, Items 1-4.

Discontinue

Set A: (Items 1 – 4) administer all items

Set B: (Items 5 – 12) discontinue when S has failed three consecutive items

Directions

Set A: S works directly from tile models for Items 1-4. In setting up models and presenting items, E places designs in proper orientation according to the diagrams on the record form.

Item 1: E hands S one tile. E puts S's hand on the smooth side of one tile. E says:

Here is a flat tile. This side is smoother. I will call it smooth.

E places S's hand on the rough side.

On this side it is rougher. I will call it rough.

E allows S to examine the tile for a few moments. When S has examined the tile, E says:

Here are three tiles. They can be turned so that either a rough side or a smooth side is on top.

E places 3 tiles on the table turning them so different surfaces are up, guiding S's hand over the tiles each time. E assembles model of Design 1 according to the diagram on the record form.

E guides S's hands over the model and says:

I have put these tiles together to make a design.

E guides S's hand over the tiles, explaining each of the steps to form the design. After a pause, E randomly places the remaining 3 tiles with 2 rough sides and 1 smooth side facing up (not in a straight line) in front of S and below the model. E says:

Here are your three tiles. I want you to make a design with your tiles just like the one I made. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S completes item correctly, E proceeds to Item 2. If asked, E says:

You may refer to the model at any time, but you are to make one of your own.

Note: Failure on an item can be either a faulty design (i.e., one that does not match the model precisely) or failure to complete the design in the allowed time. If the time limit expires, E allows S to finish, but records the maximum allowed time on the record form.

If S fails to complete the design correctly, E administers the second trial, saying:

No, it should go like this. Try it again by yourself. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails on the second trial, E says nothing and proceeds to Item 2.

Item 2: E assembles model of Design 2 according to the diagram on the record form. E says:

Here I have another design.

E guides S's hands over Design 2. E places the 3 remaining blocks in front of S (2 rough sides and a smooth side up, not in a straight line). E says:

I want you to make a design just like the one I made. Tell me when you are finished.

E places S's hand on the model before S begins. E begins timing, allows 60 seconds, records time. If S fails to complete the design correctly, E administers the second trial, saying:

No, it should go like this. Try it again by yourself. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails on the second trial, E says nothing and proceeds to Item 3.

Item 3: The tiles for Items 3 and 4 are smooth on one side and diagonally smooth and rough on the other. E says:

These two tiles are slightly different. Each is smooth on one side and half rough and half smooth on the other.

E has S examine the tiles. E assembles Design 3 according to the diagram on the record form. E says:

Here I have another design.

E guides S's hands over Design 3 and says:

See how this one goes up and down. Now arrange your tiles to make a design like the one I made. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails, E says:

No, it should go like this. Try it again by yourself. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails, E says nothing, proceeds to Item 4.

Item 4: E assembles the model of Design 4 according to the diagram on the record form.

E says:

Now I have made another design. This one goes across. Arrange your tiles to make a design just like the one I made. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails to complete Design 4 correctly, E says:

No, it should go like this. Try it again by yourself. Tell me when you are finished.

E begins timing, allows 60 seconds, records time. If S fails again, E says nothing.

If any items of Set A, first and second trials, are passed, E proceeds to Sample Item of Set B. If all Set A Items, first and second trials, are failed, E discontinues subtest administration.

Directions

Set B: Sample: E hands S one block with the smooth side on top and guides S's hand over the smooth side. E says:

Look at this block. On this side it feels smoother. I will call this side smooth.

E turns the block so a rough side is on top, places S's hand on the rough side and says:

On this side it feels rougher. I will call this side rough.

E puts S's hand on the divided side and says:

On this side it is half rough and half smooth.

E allows S to examine the block for a few moments. In scrambling the blocks for S to use, E varies the top surfaces (no more than two alike). E places the three other blocks on the table, saying:

Here are three more blocks. Now you have four. The blocks can be turned so that either a rough side, a smooth side, or a divided side is on top.

E guides S's hands over the four blocks, turning them so that different surfaces are on top. E sets out the plaque for the Sample Item. E places each design plaque parallel to the table edge, slightly to the right of the workspace for right-handed Ss, to the left for left-handed Ss. E says:

Here is a plaque. I will make a design with the blocks like the one on this plaque.

E guides S's hands to explore the plaque. E assembles the model for the Sample Item according to the diagram on the record form. E says:

I have put the blocks together to make a design like the one on this plaque.

E guides S's hand over the blocks, explaining each of the steps to form the design. E says:

You can't feel the separations between the blocks on the design plaque, but otherwise the design on the top of the blocks is the same.

S may express a concern about the texture of the sides of the blocks. If so, E says:

Only the design on the top should be the same.

After a pause, E randomly places the remaining blocks with no more than one all-rough side facing up. E says:

I want you to make a design with these blocks just like the one on the plaque. You will be timed, but it is more important to copy the design exactly than to work fast. Let me know when you are finished. Go!

If S fails to complete the design correctly within the time limit, E scrambles the blocks and says:

Try again.

Note: Failure on an item can be either a faulty design (i.e., one that does not match the model precisely) or failure to complete the design in the allowed time.

E begins timing but does not record completion of the Sample Item as a score for the subtest. On any Set B Item, if S continues working after the time limit expires, E records the maximum time allowed on the record form, and scores it as a failure. If S is eventually able to pass, E does not credit a score, but notes the ability elsewhere. If E fails to complete the design correctly within the time limit, E says nothing, proceeds to Item 5. E administers Item 5 whether S passes or fails either or both Sample Item trials.

If S began subtest at the Sample Item, and both Sample Item trials are passed, E assigns credit for all items in Set A. If E administered Set A, E credits only those Items (1, 2, 3 or 4) that were passed. E gives 1 or 2 points per item, depending upon which trial was passed correctly,

Item 5: E says:

Here I have another design.

E places the plaque for Item 5 on the S's right or left, based on handedness. E says:

I want you to make a design just like the one on this plaque. Let me know when you are finished.

E begins timing, allows 60 seconds, records time. If S completes the item correctly within time limits, E proceeds to Item 6. If S fails to complete the design correctly within the time limit, E scrambles the blocks and says:

Try again.

E begins timing, allows 120 seconds, records time. If S completes the second trial accurately, E proceeds to Item 6. If S fails both trials of Item 5, E administers Items 1 - 4 according to instructions. If any designs are passed (either trial), E proceeds with Item 6 and beyond until three consecutive Items are failed.

Items 6 – 12: E shows S the plaques for Items 6 - 12. Each time, E says:

Here I have another design. I want you to make a design just like the one on this plaque. Let me know when you are finished.

E begins timing, allows whatever time is listed on the record form, records time. For these items, E allows only one trial per item. E continues until three consecutive items are failed.

Scoring

Full credit for Set A Items is given to Ss who gain any additional credit for Items 5 -12.

Items 1 - 4: 2 points for passing the first trial; 1 point for passing trial two; 0 points if both trials are failed.

Item S: 0 points, training only

Item 5: 2 points for passing the first trial; 1 point for passing trial two; 0 points if both trials are failed.

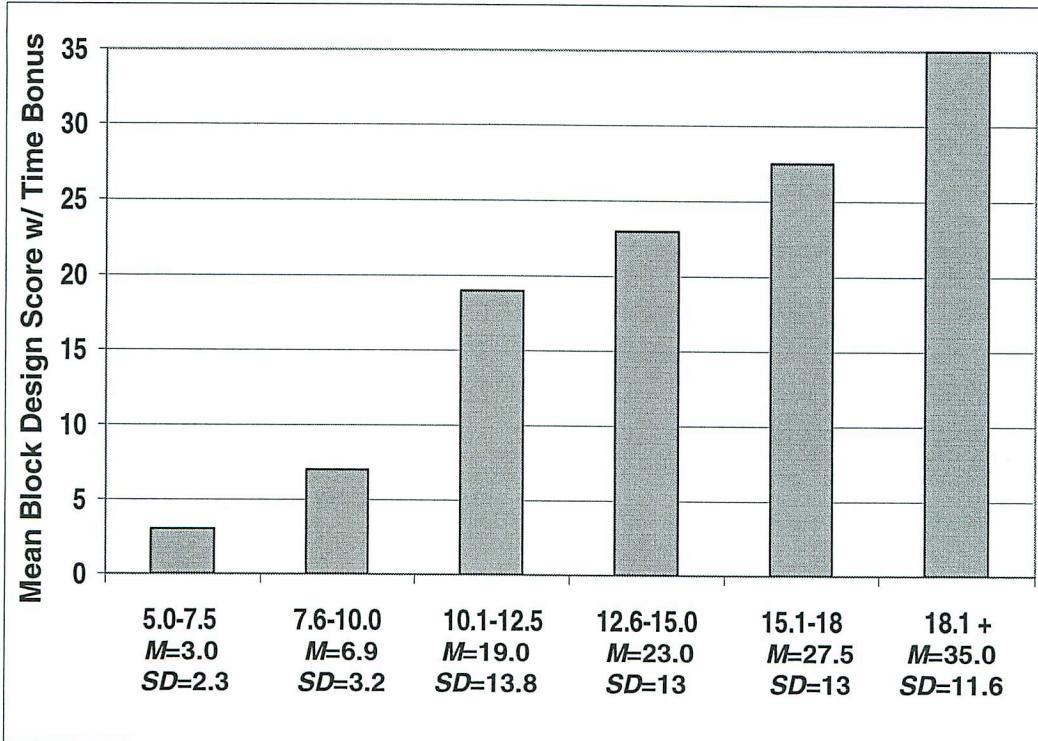
Items 6 -12: 2 points for each design successfully completed within the time limit, plus a maximum of 3 bonus points per design for quick, perfect performance (see record form). No credit is given for partially correct or incomplete performance.

Maximum score: 45 points.

Block Design Scaled Scores

Age Groups

	5.0-7.5	7.6-10.0	10.1-12.5	12.6-15.0	15.1-18	18.1 +
	n = 13	n = 17	n = 36	n = 61	n = 66	n = 37
1						0
2						4
3					0	8
4				0	2	12
5		0	0	1	6	15
6	0	3	1	6	10	19
7	1	4	5	10	15	23
8	1	5	10	14	19	27
9	2	6	14	19	23	31
10	3	7	19	23	27	35
11	4	8	24	27	32	39
12	5	9	28	32	36	42
13	5	10	33	36	40	45
14	6	11	37	40	45	
15	7	12	42	45		
16	8	13	45			
17	8	14				
18	9	15				
19	10	16				



Subtest 2: Object Coding

Materials

Set A: Guide with objects fastened in thermoformed shapes; Sample board with thermoformed shapes; 3 boards with thermoformed shapes; box with 5 holders containing supplies of objects

Set B: Guide, Sample and 3 boards with symbols above oval wells; 2 boxes containing supplies of 9 objects to be coded

Start

Start at Set A for Ss <8 years (age or suspected function).

Start at Set B for Ss >8 years (age or suspected function). If S fails to pass both the Sample and first row of set B, E returns to administer Set A.

Discontinue

When S completes all three boards of Set A or Set B, or the 12 minute (12') time limit expires. If Set A is completed in <12' E proceeds to set B until the 12' time limit expires.

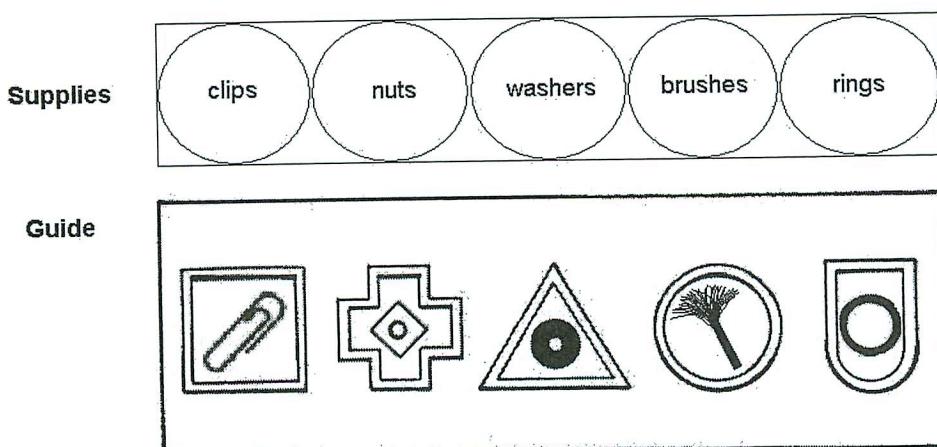
Directions

Set A: E says,

Please put your hands in your lap while I get ready for the next game.

E places the supply box above S's workspace and parallel to table edge. E places the guide in front of S. E places S's hands on the first shape and moves them across each, saying:

Look at these shapes with objects inside of them.



E places S's hands on the first shape and says:

What is this shape? Yes, it is a square.

If S does not respond, E says:

It is a square.

E then shows S the paper clip and says:

It has a paper clip in it. The paper clip goes in the square.

E moves S's hands to each successive shape and says:

What is this shape? Yes, it is a cross. The metal nut goes in the cross.
What is this shape? Yes, it is a triangle. The rubber washer goes in the triangle.
What is this shape? Yes, it is a circle. The tiny brush goes in the circle.
What is this shape? Yes, it is a cup. The plastic ring goes in the cup.
Each object goes in a different shape.

If S does not seem to understand the instructions, E repeats them more slowly. When E is satisfied that S understands, E says:

You will be able to use this board as a guide when you put the objects into the shapes they go with on the other boards.

E moves the guide to the right or left of S's workspace, based on handedness. E guides S's hands to the box holding the objects, and says:

Here is the box with holders that have the clips, nuts, and other supplies in them.

Sample: E presents the Sample board, places S's hand on the first shape, and says:

Look here where there are the shapes – the cross, the square, and the others – but they have no objects in them. We will put the right object in each shape, like this:

E puts S's hand on the first shape and says:

What is this shape? Yes, it is a cross. What goes in the cross?

If S says "a nut," E says:

Yes, find a nut in the box and put it in the cross.

If S doesn't answer or doesn't know, E says:

Look at the guide. What object is in the cross?

When S finds the nut, E encourages S to place it in the cross. E repeats the process for each object in the sample row. When E is satisfied that S understands the instructions, E proceeds to Board 1. E replaces Sample board objects to the box.

Board 1: E says:

I am going to show you other empty shapes. Look at this board. I want you to put the objects that belong in each shape in their place, like we just did. You will always have the guide to refer to. There are three rows. Do each row across, one at a time, without skipping any. Tell me when you are finished. Go!

E begins timing and allows unlimited time per board, up to a maximum of 12' for the entire subtest. If S skips a shape or a row, E gently guides S's hand across the rows and says:

Do them in order and one row at a time.

E guides S's hand to show the right-to-left and top-to-bottom orientation. This instruction may be given only once. E continues to time the subtest while the correction is occurring. At the end of Board 1, E stops the watch, notes the time, but does not clear the time to zero. Each time a Board is complete, E begins timing where S completed prior Board. E says:

Rest a minute with your hands in your lap.

E records the time (without re-setting watch), scores number right, errors and omissions, then replaces objects in the box. If the 12' time limit has not been reached, E proceeds to Board 2.

Boards 2 and 3: E presents Board 2 (or 3) and says:

Here are some more. Do them the same way and do them in order.

E continues timing. If S skips items and E has not yet said: "Do them in order..." E says:

Remember to do them in order and one row at a time.

E gives no additional help. When the end of Board 2 (or 3) is reached, E says:

Rest a minute with your hands in your lap.

E records time, scores number right, errors and omissions, and replaces objects in the box. When the 12 minute (total for subtest) time limit is reached, E says:

Stop and put your hands in your lap.

E records time, number right, errors and omissions for that board as far as S has progressed. If S has completed Set A in less than 12 minutes, E proceeds to Set B and continues timing until the 12 minute (12') time limit is reached.

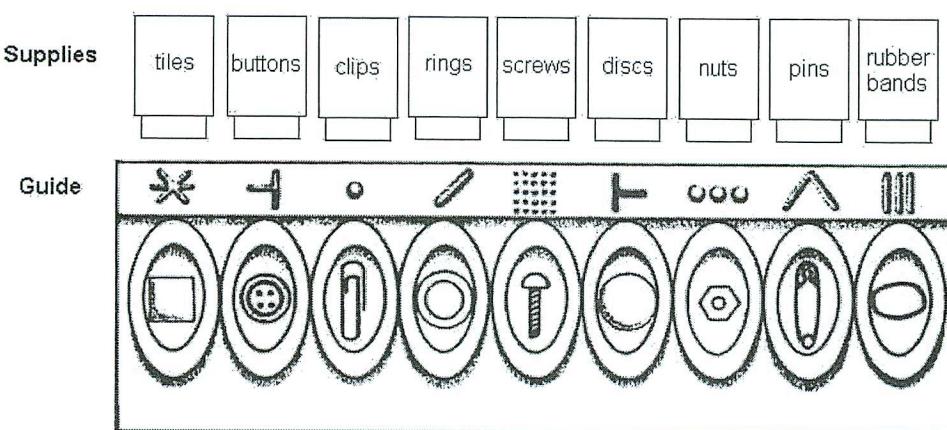
Directions

Set B: E says,

Please put your hands in your lap while I get ready for the next game.

E opens and sets out the boxes with supplies of objects to be coded. E places boxes above S's workspace and parallel to the table edge. E takes the guide and places each object in the well under its symbol in the order shown in the diagram. E places the guide in front of S and says:

Look at this pattern. There are symbols on top which go with objects below.



E places S's hands on the first symbol, then the object coded with it in the well, and guides S's hands across the nine pairs, saying:

The first symbol goes with the tile.

The second symbol goes with the button.

This one goes with the clip.

This one goes with the ring.

This one goes with the screw.

**This one goes with the disc.
This one goes with the nut.
This one goes with the safety pin.
This one goes with the rubber band.
Each symbol goes with a different object.**

If S does not seem to understand the instructions, E repeats them more slowly. When E is satisfied that S understands, E says:

You will be able to use this board as a guide when you put the objects under the symbols they go with on the other boards.

E moves the guide to the right or left of S's workspace, depending on handedness. E takes S's hand, shows S the boxes of supplies, and says:

Here are the boxes with all the objects in them, in the same order as the guide.

Sample: E places Sample board in S's workspace and says:

Now look at this board where the symbols are on top but there are no objects below. We are going to put the objects that go with the symbols in the spaces below them, like this:

E places S's hand on the first symbol and says:

What goes with this one?

If S answers "the button" E says:

Yes, the button. Put it in the well below the symbol.

If S does not respond or responds incorrectly, E directs S's hand to the guide and says:

Look at the guide.

E proceeds in this way through the Sample allowing S as much independence as possible. When the Sample board is completed, E says:

Rest a minute with your hands in your lap.

If S passes 4 or 5 placements, E proceeds to Board 1. If S fails to code 3 of the 5 Sample objects with E helping, E repeats the process. If S fails 3 of 5 on the second trial, E administers Set A as per instructions above. E replaces the objects used for the Sample in the boxes.

Board 1: E places Board 1 in S's workspace, and says:

I am going to show you another board with the symbols on top and no objects below. I want you to fill the wells with the objects that match the symbols the same way we just did together on the small board. You will always have the guide to refer to. There are three rows. Do each row across, one at a time, without skipping any. Keep working until you finish the board. Tell me when you are finished. Go!

E begins timing and allows unlimited time per board, up to a maximum of 12' for the entire subtest. If S skips a well or a row, E gently guides S's hand across the rows and says:

Do them in order and one row at a time.

E guides S's hand to show the right-to-left and top-to-bottom orientation. This instruction may be given only once. E continues to time the subtest while the correction is occurring. At the end of Board 1, E stops the watch, notes the time, but does not clear the time to zero. Each time a Board is complete, E begins timing where S completed prior Board. E says:

Rest a minute with your hands in your lap.

When the end of Board 1 is reached, E stops the watch, notes the time, but does not clear the time to zero. E records the time (without re-setting watch), scores number right, errors and omissions, then replaces the objects in the box. If the 12' time limit has not been reached, E proceeds to Board 2. If S exceeds the 12' time limit, E notes S's place at that point, allows S to finish, but does not proceed to either Board 2 or Board 3. E scores number right, errors and omissions. E replaces objects in the boxes. E says:

Rest a minute with your hands in your lap.

Boards 2 and 3: E replaces Board 1 with Board 2 (or Board 3) and says:

Here are some more. Do them the same way and do them in order.

If S skips wells or rows, E says:

Remember to do them in order.

E gives no additional help. This reminder can only be stated once. When the end of Board 2 (or 3) is reached, E says:

Rest a minute with your hands in your lap.

E records time, scores number right, errors and omissions. E replaces the objects in the boxes. When the 12' (total for subtest) time limit is reached, at any point on any board, E says:

Stop, and put your hands in your lap.

E records time, number right, errors and omissions for that board as far as S has progressed.

Scoring – Object Coding Total Score

E records the number right, number of errors, and number of omissions for each board. Score for the subtest, either set A or set B, is the number of correctly coded items. If S has taken items for both sets, the total score is the sum of passed items on both sets. Time is recorded, in minutes and seconds, for each board for computation of the Object Coding Efficiency Score.

Maximum Scores: Set A: 45 points

Set B: 72 points

Sum of Set A points + Set B points = total score (as per record form)

Maximum Total Score (45+72): 117

Scoring – Object Coding Efficiency Score

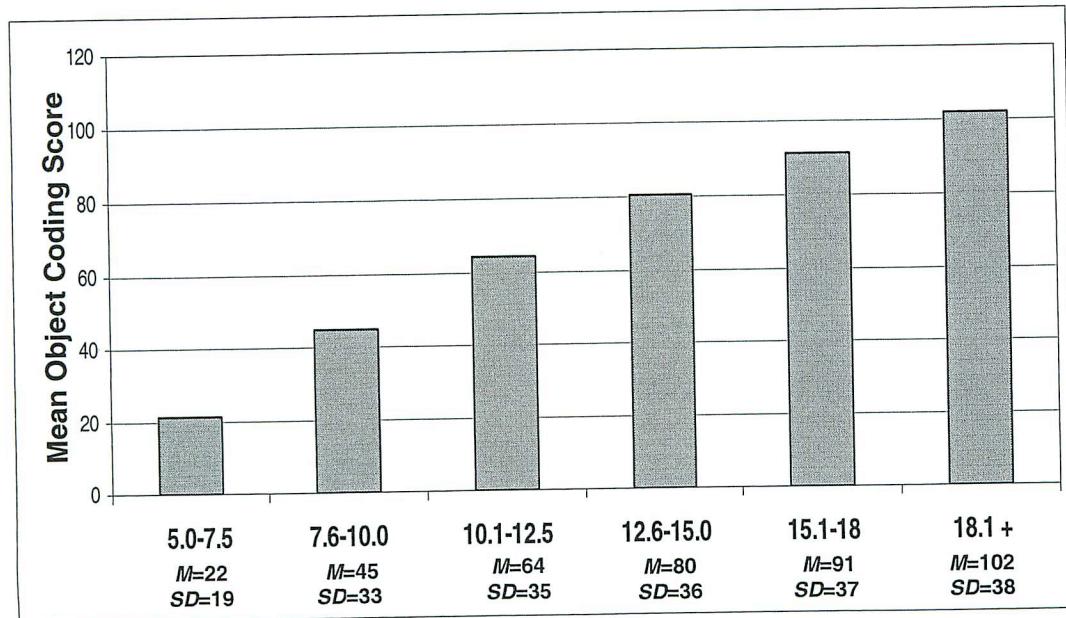
For Ss who took only Set B Items, E computes the sum of time recorded in minutes and seconds, then drops the seconds for a minutes score. E then divides the number of items correct on Set B by the number of minutes S took to complete the items. The result is the OC Efficiency score.

Object Coding Scaled Scores

Scaled Score	Age Group					
	5.0-7.5	7.6-10.0	10.1-12.5	12.6-15.0	15.1-18	18.1 +
n = 9	n = 16	n = 25	n = 31	n = 20	n = 12	
1						
2					0	0
3				0	5	13
4			0	9	18	26
5		0	6	21	30	38
6	0	1	18	33	42	51
7	3	12	29	45	54	64
8	9	23	41	56	67	77
9	15	34	53	68	79	89
10	22	45	64	80	91	102
11	28	56	76	92	104	115
12	35	67	88	104	116	117
13	41	78	99	116	117	
14	47	88	111	117		
15	54	99	117			
16	60	110				
17	66	117				
18	73					
19	117					

Object Coding Efficiency Scaled Scores

Scaled Score	n = 88
1	
2	
3	
4	
5	0.00
6	0.65
7	1.44
8	2.23
9	3.03
10	3.82
11	4.61
12	5.41
13	6.20
14	6.99
15	7.79
16	8.58
17	9.37
18	10.17
19	10.96



Subtest 3: Situations

Materials

Various common objects for use in carrying out assigned tasks, listed by item.

Start

Item 1 for all Ss

Discontinue

Administer all items to all Ss. Do not discontinue if any items are failed.

Directions

Materials vary for each of the 4 Items. E times each item from the last word of instructions to the time limit. While time taken is not a significant variable, efficiency at the tasks involved may be compared to the research group mean times as listed on the record form.

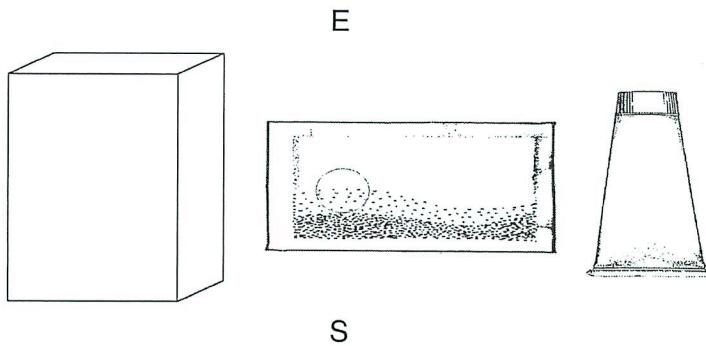
E may not wish to stop S who is still working when the time limit expires. E records tasks passed at the time limit. E notes the time when the completion of tasks occurred. The score for the item will reflect the level of completion at the maximum allowed time.

E says:

I am going to ask you to do some things for me. They will be like real situations, but today they're just pretend. Please try to do them as carefully as you can. You will be timed, but it is more important to do the tasks well than to rush. I am going to put some things in front of you. Keep your hands in your lap until I say "Go."

Item 1: Bandage

Materials: adhesive bandages in box, moist towelette in paper packet, and plastic tube of hand sanitizer with cap, in this array:



S

E holds out E's pointer finger and says:

Pretend I cut my finger right here.

E places S's index finger at the upper knuckle of E's index finger of whichever hand E does not use for writing. E says:

Here are some things from my first aid kit.

E places S's hand on the table and allows for brief exploration. E says:

Please use them on my cut. Go!

E begins timing and allows a maximum of 7 minutes. If S asks about any of the materials, such as asking, "What's this?" E says:

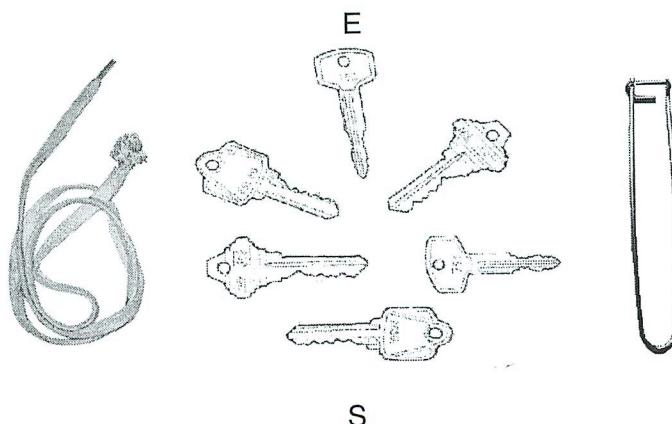
I think you know what it is. Make your best guess.

E gives no additional help. When S finishes, E records time, tasks passed, tasks failed. E says:

I am going to put some other things in front of you. Keep your hands in your lap until I say "Go."

Item 2: Keys

Materials: 6 keys, 2 exact sets of 3 keys each; 1 large clip key holder; 1 long shoelace, plastic-tipped at one end, knotted at the other. E places materials in front of S so that identical key head shapes are not next to each other:



E says:

I just had a new set of keys made. One set is for you and one set is for me. Put my complete set of keys on the long key holder, and put yours on the long string. Then tie the long string around your neck so you won't lose your keys. Go!

E begins timing and allows a maximum of 7 minutes. If S asks what the key holder is, E says:

It is what I use to keep my keys together.

E gives no additional help. When S finishes, E records time, tasks passed, tasks failed. E says:

I am going to put some other things in front of you. Keep your hands in your lap until I say "Go."

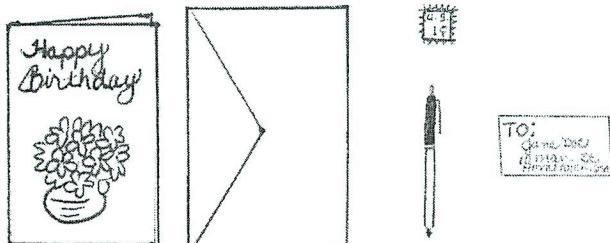
Item 3: Birthday Card

Materials: greeting card, envelope, embossed address label, stamp, and click ballpoint pen, as pictured on the next page.

E says:

Pretend it is your sighted friend's birthday. You want to send a birthday card. Here are all the things you will need to prepare it for mailing. Go!

E



S

E begins timing and allows a maximum of 7 minutes. If S has not finished when the time limit is reached, but is near completion, E notes progress at the time limit and allows S to continue.

If S asks what the embossed address label is, E says:

It has your friend's address on it.

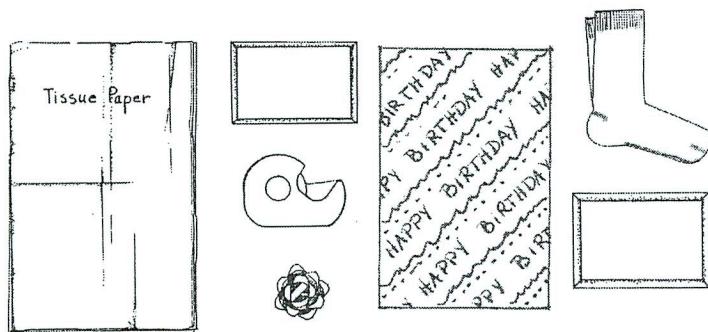
E gives no additional help. When S finishes, E records time, tasks passed, tasks failed. E says:

I am going to put some other things in front of you. Keep your hands in your lap until I say "Go."

Item 4: Gift

Materials: 1 pair of socks, 1 sheet of tissue paper, 1 small gift box (top and bottom separate), 1 sheet of wrapping paper, roll of tape, and 1 bow (sticky back), in this array:

E



S

E says:

Now I want you to wrap a gift for your friend's birthday. Here are all the things you will need. Go!

E begins timing and allows a maximum of 10 minutes. If S has not finished when the time limit is reached, but is near completion E notes progress at the time limit and allows S to continue.

E gives no additional help. When S finishes, E records time, tasks passed, tasks failed.

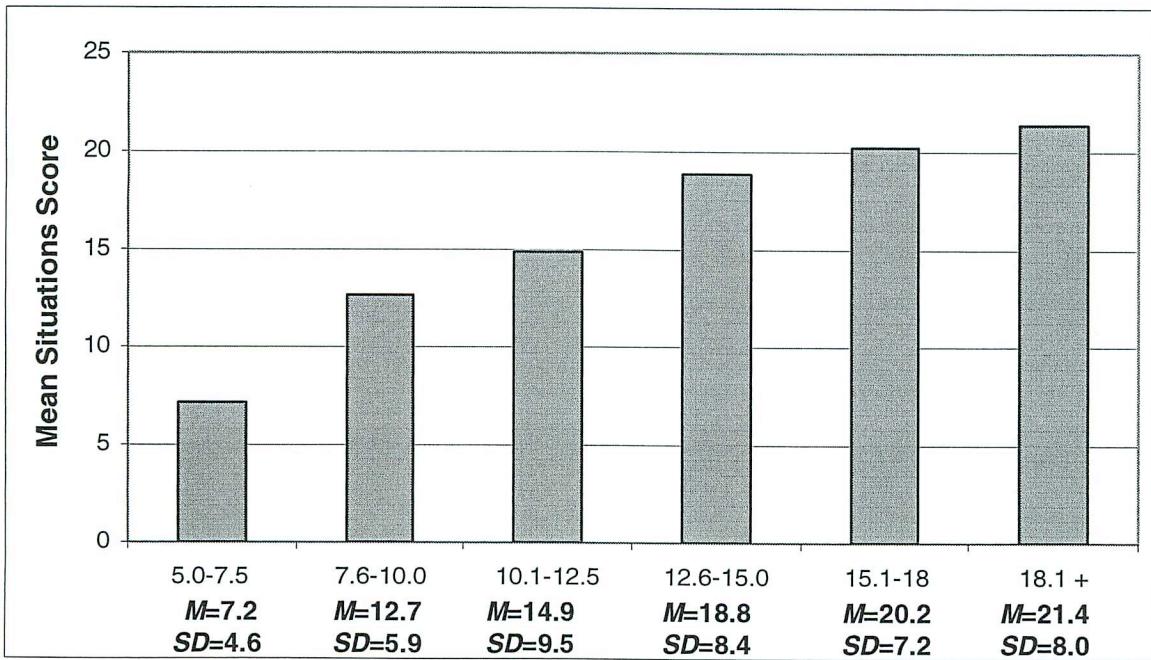
Scoring

Each item is scored 1 or 0. Total score is the number of accurate actions.

Maximum score: 30 points.

Situations Scaled Scores

Scaled Score	Situations					
	5.0-7.5 n = 11	7.6-10.0 n = 14	10.1-12.5 n = 25	12.6-15.0 n = 30	15.1-18 n = 20	18.1 + n = 12
1					0	0
2					1	2
3		0		0	4	5
4		1		2	6	5
5	0	3	0	5	8	8
6	1	5	2	8	11	11
7	3	7	5	10	13	13
8	4	9	9	13	15	16
9	6	11	12	16	18	19
10	7	13	15	19	20	21
11	9	15	18	22	23	24
12	10	17	21	24	25	27
13	12	19	24	27	27	30
14	13	21	28	30	30	
15	15	23	30			
16	16	25				
17	18	27				
18	19	28				
19	21	30				



Subtest 4: Puzzle Squares

Materials

A grid array board with spaces that form 9 squares; a box holding 25 wooden pencil segments ("rods"), which fit in the spaces; a moist towelette for use at completion

Start

Sample and Item 1 for all Ss

Discontinue

If Items 1, 2, and 3 are all failed or after 4 consecutive failures thereafter

Directions

Note: Whenever a rod or square is placed on the board, it can be in any position that permits the correct number of sides. Response sheet illustrations present one configuration; others are possible. For example, Item 1 places the square in the center, but it can be in anywhere on the board. This rule holds true for all items as long as the integrity of the figure is maintained, and the size of the square is one rod in length on all sides.

E says:

Now we are going to do something called Puzzle Squares.

E places board in front of S and puts S's hand on it. E says:

Here is a board. It has grooves in it. They can be filled. We will use these pencil pieces, which we will call rods, to fill them.

E places one rod in S's hand and says:

Put the rod in a groove in the board.

If S places the rod in a groove, E says:

Good.

If S does not place the rod correctly, E places it in a groove and places S's hand on it. E repeats the process as many times as necessary until E is satisfied that S understands the instructions.

Sample: E says:

I am going to make a square with four rods.

E constructs square toward the center of the board. E has S examine it, then removes it.

E says:

Now you do it.

If S constructs a square, E proceeds to Item 1. E repeats above instructions until S has constructed a square and appears to understand the task. E leaves the square on the board.

Item 1: E says:

For the kind of puzzle you will be doing, I will give you the board with a certain number of squares on it. Each time, I will ask you to add or remove a certain number of rods so that a certain number of squares will be on the board. In order to do the puzzles right, all rods on the board should be part of a square, with none left over when you are finished. The squares will always be the size of the square you made on the board. You will be timed, but it is more important to be accurate than to work fast. Tell me when you are finished.

E places S's hand on the square. E hands S 3 rods and says:

I want you to add these 3 rods to the square on the board to make 2 squares.

E begins timing.

If S correctly adds the rods (they can be in any direction from the center). E records score and time. E proceeds to Item 2.



If S fails to add a square, E demonstrates the added square, then has S imitate the construction until it is correct (two adjoining squares). No score can be given if S fails the first attempt to make the square, but E continues until satisfied that S understands the task.

Item 2: (see note on P. 16 regarding orientation and size.)

With the 2 squares still on the board, E hands S 5 additional rods and says:

Now add these rods to make 4 squares.

E begins timing.

If S's placement is correct, E records score and time and proceeds to Item 3.



If S cannot add the rods, begin Item 2 again. If S's placement is correct on the second trial, E proceeds to Item 3, but does not give credit for the item. If S fails to gain credit for both Items 1 and 2 (both trials), E attempts Item 3 with just one trial. If S fails, E discontinues the subtest.

Item 3: (see note on P. 16 regarding orientation and size.)

With the 4 squares still on the board, E says:

E says: **How many squares are there on the board now?**

If S says "4" E says: **Good.** If S says anything else, E says: **There are four.**

This puzzle is a little different. I want you to remove 2 rods and leave 3 squares.

E begins timing. If S places rods that are unattached to a square, E says:

Be sure there are complete squares on the board, with none left over.

This instruction may be given any number of times it is needed. If S passes Item 3, E records time and score and proceeds to Item 4. If S fails, E repeats demonstration only.

Items 4-12: Each item is given in the same way. E says:

I want you to add/remove ____ rods and leave ____ squares,

as per item descriptions below. E begins timing after instructions are given.

4. Remove 5 rods and leave 2 squares

5. Remove 4 rods and leave 2 squares

E creates the 6 square grid as pictured on the record form.

E says: **How many squares are there on the board now?**

If S says "6" E says: **Good.** If S says anything else, E says: **There are six.**

6. Remove 2 rods and leave 5 squares

7. Remove 1 rod and leave 5 squares

8. Remove 3 rods and leave 4 squares

9. Remove 4 rods and leave 4 squares

E creates the 9 square grid as pictured on the record form.

E says: **How many squares are there on the board now?**

If S says "9" E says "good." If S says anything else, E says: **There are nine.**

10. Remove 1 rod and leave 8 squares

11. Remove 2 rods and leave 8 squares

12. Remove 2 rods and leave 7 squares

13. Remove 3 rods and leave 7 squares

14. Remove 4 rods and leave 6 squares

E records score and time for each item.

Scoring

Each item is scored 1 or 0. Total score is the number of correct responses.

E records time for each item to compare with the mean values listed. Total time is the sum of seconds taken for each item, to be compared with study means listed on the record form.

Maximum score: 14 points.

Puzzle Squares Scaled Scores

Puzzle Squares

	5.0-7.5	7.6-10.0	10.1-12.5	12.6-15.0	15.1-18	18.1 +
	n = 9	n = 15	n = 30	n = 53	n = 65	n = 38
1						
2						
3						0
4				0	0	1
5			0	1	1	3
6		0	1	2	2	4
7	0	1	2	3	3	6
8	1	2	3	4	5	7
9	2	3	4	5	6	9
10	2	3	6	7	8	10
11	3	4	7	8	10	12
12	4	5	8	10	11	13
13	5	5	9	11	13	14
14	5	6	10	13	14	
15	6	7	11	14		
16	7	7	12			
17	7	8	14			
18	8	9				
19	9					

