

PROGRAM TO DEVELOP EFFICIENCY IN VISUAL FUNCTIONING

NATALIE C. BARRAGA, *Directing Editor*
JUNE E. MORRIS, *Project Director*

VOLUME I

Diagnostic Assessment Procedure



American Printing House for the Blind, Inc.

LOUISVILLE, KENTUCKY

KIT 1-08530-00
Manual 8-16040-00

Glossary of Terms

The following items are used in the *Program to Develop Efficiency in Visual Functioning*

Assessment A process of determining and specifying certain characteristics of behavior through uniformly administered procedures.

Diagnosis A description of characteristics which a person currently possesses.

DistraCTOR(s) One or more incorrect choice(s) in a display of several items which may divert or distract attention from the correct choice.

Evaluation The total process of assessment and interpretation of characteristics or behavior Evaluation includes objective and subjective judgments and recommendations derived from observation and assessment of the individual as well as interpretation of all pertinent data.

Instructional Planning Index An organizational procedure to guide instructors in the choice of those lessons in the instructional sequence appropriate for a particular low vision learner

Mastery Proficient or competent performance of all portions of a specific visual task.

Nonmastery A lack of proficiency or competence in the performance of any portion of a specific visual task.

Performance The carrying out of a task or action, either spontaneously or prompted by another person

Reliability Whether or not an individual would be assigned mastery or non-mastery as a result of two assessment administrations

Stimulus An action or object used to elicit a visual response

Summary Table A chart on which the evaluator records mastery or nonmastery on each item so that performance on visual tasks can be readily identified.

Validity The degree to which something assesses what it is said to assess

a content validity—the extent to which uniformly administered procedures assess behavior as judged from the characteristics or content of those procedures

b face validity—the extent to which individuals performing the assessment perceive what is intended in the assessment.

Visual Function Physiological action of the visual system in responding to observed things.

Visual Task Any task performed by using vision in its accomplishment.

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Objective: *Learner will read single words.*

Visual Task: Identify words on sight

Materials: 1 sheet containing the words *jump, book, lamp, play, word, desk*

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present the sheet with words directly in front of learner to be held as close as necessary. Point to the first word at the left top and say:

"Look at this word. Say the word if you know it."

Maximum time for response: 20 seconds. If word is not identified in this time, go to another word.

3. Repeat direction #2 indicating each of the other words in order.

Response: *Learner says each of the six words.*

Note: If more appropriate for some learners, occluder may be used.

Developmental Level: 6-7 years.

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ITEM NO. 39

Objective: Learner will match words to pictures.

Visual Task: Associate words and pictures

Materials: 6 word cards (run, jump, sit, ball, girl, dog)
1 sheet with pictures

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present picture directly in front of the learner and say:
"Look at all of these pictures carefully."
Pause for the learner to examine all the pictures on the page.
Learner may bring as close as desired.
3. Give the 3 *noun* cards (ball, girl, dog) to the learner and say:
"Look at all of these words carefully."
Pause for the learner to examine the word cards.

4. Say:
"Each of these words will go with a picture. Not all of the pictures will get a word."
Pause. Then say:
"Show me the picture that goes with each word."
Learner may respond in a number of ways: lay word beside picture; verbally indicate choices; or select word and point to picture.
5. Remove the noun cards and repeat directions #3 & #4 with the *verb* cards (run, sit, jump).

Response: Learner selects word cards to match pictures.

Developmental Level: 6-7 years.

Objective: *Learner will write letters and numbers from dictation.*

Visual Task: Reproduce symbols from memory

Materials: 1 page lined paper in Record Booklet
Fine-tipped black felt pen

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place paper and pen on the working surface in front of the learner. Say:

"I am going to say some letters and numbers."

Pause. Then say:

"After I say each one, you write it on a line on your paper. Listen carefully."

3. Say the following one at a time. Repeat each one once. (The letters and numbers may be written in any style and in either upper or lower case so long as they are legible.)
E 7 M 8 F

Response: *Learner writes each letter and number on or close to line in appropriate orientation. (Criteria for scoring in Record Booklet.)*

Developmental Level: 6-7 years.

Foreword

The *Program to Develop Efficiency in Visual Functioning* was made possible through Grant No. G007605448 awarded the American Printing House for the Blind (APH) by the Bureau of Education for the Handicapped (BEH); U.S. Office of Education; Department of Health, Education, and Welfare. The new program is based on the earlier *Utilization of Low Vision Kit* (Barraga, 1970) which was disseminated nationally as a cooperative project by the author, the Bureau for Education of the Handicapped, the American Printing House, and a national group of consultants.

The *Utilization of Low Vision Kit* has been well received and widely used since its publication by APH. However, research by Ozias (1975) revealed the need for extensive revision and expansion of both its components; namely, the Visual Efficiency Scale and the Teacher's Guide. The purposes of the project in which the new program was developed were to (a) revise and expand the teaching materials, (b) revise and expand the Visual Efficiency Scale into a diagnostic assessment procedure, and (c) develop basic student materials.

The *Program to Develop Efficiency in Visual Functioning* has resulted from the cooperative efforts of Natalie C. Barraga and her staff at the University of Texas at Austin, who were responsible for developing the program materials, and the research and development staff at APH, who were responsible for evaluation of the materials. Both were supported and assisted by a group of knowledgeable consultants.

Objective: *Learner will identify letters in different type styles.*

Visual Task: Recognize letter constancy

Materials: 1 (4 × 5) card with letters

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present sheet with letters directly in front of and facing the learner. Learner may hold sheet closer if desired. Say:
"Look at all of the letters on this page."
Pause for 15-20 sec., then point to the print letter B and say:
"What letter is this?"
3. Pointing to each one (or exposing), ask learner to name the remaining 17 letters.

(Learner only gives letter name — not type style.)

Response: *Learner names each letter on sight.*

Note: Some learners may need an occluder because of inability to see the letters with all of them exposed at one time. Others may not need the occluder or wish to use it. Learner may have choice of whether or not to use it, but if used, this fact should be noted under comments in the Record Booklet.

Developmental Level: 6-7 years.

Introduction

This program is planned as an aid to teachers and other professionals who are working with individuals who have low vision. At the heart of the program are (1) diagnostic assessment procedures to determine the visual functioning of low-vision individuals and (2) follow-up instructional materials geared to help those persons use effectively whatever vision they have. For an overview of the components in the program see pages 2 and 3.

Why is such a program necessary? Experience has shown that many persons with low vision are not employing their usable vision. Some individuals—particularly those labeled “blind”—may not even know they can see. Because these people are accustomed to functioning as blind persons, they do not understand *how* to look. Others who have tried to use vision in the past may have stopped trying because of negative experiences. For those individuals, attempts to see may be associated with frustration, stress, self-consciousness, or feelings of failure. Still others are very young or have developed serious visual problems recently.

The *Program to Develop Efficiency in Visual Functioning* was created to meet the needs of all these people.

Because the need was clear, research and development concerning the use of low vision has been given increasing attention since the early 1960s. Studies have provided information regarding normal visual development as well as the use of vision when parts of the visual system are impaired. Conclusions derived from these studies have been accepted by persons working in the medical, optometric, psychological, and educational disciplines. Many of these findings have been incorporated as a theoretical rationale underlying the *Program to Develop Efficiency in Visual Functioning*.

A basic assumption is made that efficiency in the use of vision is desirable for all low vision learners. The major portion of the program, therefore, focuses on effective use of low vision.

The *Program to Develop Efficiency in Visual Functioning* is designed to be used with visually handicapped persons of any age. Prospective learners should, however, evince a mental age of 3 years or more while giving evidence of a potential for further learning and development. Slowness in learning is no impediment to the use of this program. Also it is suitable for low vision learners with handicaps other than visual.

To meet the needs of all such learners, the program provides both diagnostic assessment and instruction on the use of vision. Although the program is designed for use by specialists in the education of the visually handicapped (especially low vision learners), other persons in special education and in such professions as occupational and physical therapy, optometry, psychology, and psychology, may find portions of the program useful in their work. Instructors

Objective: *Learner will match words by type styles.*

Visual Task: Recognize likenesses and differences in words

Materials: 3 strips with words in several type styles (*girl, head, rock*)

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present strip a. (with the first word in print) to learner's left. Point to the print word and say:
"Look carefully at this word."
Learner may hold as close as desired.
Pause for about 15 sec., then point to the words in different type styles in the row and say:

"Show me the word that looks most like the first one."

Learner may respond by pointing, touching, or verbally indicating the correct match.

3. Repeat direction #2, presenting strip b. (with first word in manuscript), then strip c. (with the first word in script).

Response: *Learner selects identical words.*

Developmental Level: 5-6 years.

who have no recent specialized training in vision are advised to work with a resource person knowledgeable in low vision.

A historical review of the concepts, practices, and research in the field of low vision along with the theoretical bases of the program is summarized in Chapter I of the *Source Book on Low Vision* that accompanies the program.

Before attempting to use any particular section of the program, instructors need read carefully the rest of this introduction and all instructional guides.

Program Components and Organization

The components of the complete program are described here briefly. More detailed information may be found in the instructor's guides that accompany the materials.

Diagnostic Assessment Procedure (DAP)

- A Low Vision Observation Checklist (LVOC) which is a guide to the observation and recording of pertinent behaviors and attitudes (to be used before the assessment items).
- An Evaluator's Guide to the administration and scoring of assessment items.
- 40 criterion-referenced assessment items that provide a representative sampling of the many visual tasks needed for efficient functioning.

- A Record Booklet that provides for a permanent accounting of mastery or nonmastery of each task.
- A Summary Table for summarizing mastery of tasks across all categories of visual development.

- An Instructional Planning Index to be used in developing individualized educational plans.

All but a few of the three-dimensional objects and graphic materials needed in the administration of the Diagnostic Assessment Procedures are provided. *These materials are not to be used for any other purpose or at any other time.* Items not provided are readily available.

Design for Instruction

At the core of the Design for Instruction is a lesson sequence designed to improve visual functioning. Included are:

- 150 lessons grouped by category of visual development.
 - A Guide for Instruction that includes an overview of the problems of low vision, suggestions for instruction, and guidelines for rating progress.
- Graphic materials called for in the lesson plans are provided.

ITEM NO. 35

Objective: *Learner will select word card to match word seen at a distance.*

Visual Task: Match word to word
Materials: 11 word cards: 6 in small print (EXIT, ENTER, PUSH, PULL, BOYS, GIRLS) and 5 in large print (EXIT, PUSH, PULL, BOYS, GIRLS)

Directions:

1. Choose an area that has favorable lighting conditions and is quiet. Seat the learner with back to windows or other glaring light source.
2. Hand learner the 6 cards with smaller print and say: "Look at the word on each of these cards."

- Be sure that learner looks carefully at each word. Learner may hold as close as desired.
3. After about 20-30 sec., move about 4 ft. (12 dm) away from and facing learner. Hold up the word PULL in large print and say: "Look at my card. Tell me when you can see the word."

If learner cannot respond when the large print card is held at 4 ft. (12 dm), move to 3 ft. (9 dm), and if necessary 2 ft. (6 dm) or even closer. Note distance.

Pause. Then say:
"Show me your card that has the same word on it."
Being able to read the word is not necessary, but if learner chooses to respond by saying word, that is permissible.
Return the card to the learner and say:
"Mix up the cards."

4. Repeat direction #3 using cards in the following order: EXIT PUSH GIRLS or BOYS.

Whether girls or boys is shown depends on the sex of learner.

Response: *Learner selects word identical to word seen at distance.*
Note: If learner normally uses telescopic device for distance viewing, this should be permitted and recorded under comments in Record Booklet.

Developmental Level: 5-6 years.

Objective: *Learner will copy capital letters and lower case letters in manuscript and in script.*

Visual Task: Copy symbols in different styles and cases

Materials: 1 card (4 × 5) with letters
1 page unlined white paper in Record Booklet
Fine-tipped black felt pen

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the paper and pen in front of the learner. Hand sheet of letters to learner to be held as close as desired. Point to the J and say:*

“Look at this symbol. It is the letter J.”

Pause for learner to examine the letter. Say:

“Make one on your paper that looks like it.”

3. Say:

“Now make this W.”

4. Repeat direction #3 substituting each letter.

Response: *Learner makes eight legible letters closely resembling models. (Criteria for scoring in Record Booklet.)*

Note: An occluder to expose only one symbol at a time may be used if necessary or appropriate for learner. Note under comments in Record Booklet.

Developmental Level: 5-6 years.

This Source Book details the history of research in low vision along with reprints of pertinent professional articles which have provided the philosophical underpinnings for the program. Diseases and dysfunctions of the eye are discussed and the effects of light, magnification, and low vision aids are explored at length. Separate chapters examine the problem of interdisciplinary communication and cooperation as well as the special concerns involved in working with very young, older, and multihandicapped individuals. The appendices include a list of commercial materials available to reinforce or extend the basic lessons; a complete Bibliography and Glossary; and a list of sources of materials for vision reduction simulation.

Use of the Program

You, the Instructor

- You are concerned about efficient use of vision for functional and learning purposes in low vision persons.
- You realize that if light reception is demonstrated, then there is potential for improvement in visual functioning.
- You wish to be able to assess and evaluate for yourself the range of visual functions that the individual(s) can demonstrate at present.
- You believe that the efficiency of visual functioning can be improved through planned learning experience.

Getting to Know the Program

- Study the scope and content of the entire program.
- Read the *Source Book on Low Vision*. This is especially important for those who are inexperienced or have limited training in low vision.
- Review the Low Vision Observation Checklist and the Diagnostic Assessment Procedure. Then examine the Record Booklet, Summary Table, and Instructional Planning Index. As you do so, think of particular individuals for whom specific portions might be most appropriate.
- Skim the Design for Instruction to understand the overall focus and specific lesson sequence in the eight categories of visual development.
- Look through the tangible and graphic materials included; then determine the materials needed but not included. Examine the lists of supplemental materials listed in the Source Book to see if any of them may be available to you.

Plan for Action

- Read the materials suggested as appropriate for your purposes.

- Be prepared to administer the Low Vision Observation Checklist and the Diagnostic Assessment Procedure slowly; several sessions on the same day or on different days may be desirable for some individuals.
- Think of those individuals who have the same visual problems but function quite differently. Consider, too, those persons whose visual functioning varies from day to day or from one situation to another.
- Select the individuals for whom all or some portions of the lessons might be appropriate.
- Be prepared for (a) some learners to improve consistently; (b) some to show improvement rapidly until a plateau is reached; and (c) some who seem unable to respond and then suddenly begin to show progress.
- Discuss the plan for improvement with parents or caretakers. If the learner is mature enough, discussion of the instructional plan with him or her can be a motivating factor.

Diagnostic Assessment Procedure (DAP)

Evaluator's Guide

The Diagnostic Assessment Procedure is a clinical tool designed to derive specific information on the present level of visual functioning of low vision learners. The purpose of this guide is to assist the evaluator in using the DAP.

Using the DAP The DAP assesses a learner's ability to use vision for a variety of tasks and to identify the visual stimuli understood by the learner. The overlap between visual functioning and cognition must be recognized. The evaluator and others working with low vision learners should be aware of the fact that learners cannot function visually beyond their level of perceptual development or cognitive understanding. Thus any interpretation of a learner's visual functioning must take into account the learner's cognitive level.

Through use of DAP, the evaluator will be able to identify specific gaps or weaknesses as well as strengths in visual functioning. This data can then be utilized to plan instruction for a learner. The assumption is made that if a learner is unable at the time of assessment to perform certain visual tasks, individualized instruction may lead to mastery of these tasks and to greater visual efficiency.

Information obtained from use of the DAP is intended primarily for selection of appropriate lessons in the accompanying Design for Instruction. The information is also useful in designing individual educational plans for low vision learners. Although the DAP is not intended for use in selection of appropriate reading media—print or braille—results from the evaluation may be one source of information for this purpose. While mastery of various visual tasks may suggest potential use of print material, it must be emphasized that nonmastery does not necessarily preclude future instruction in print media.

ITEM NO. 33

Objective: *Learner will relate inner detail in figures of different size.*

Visual Task: Select similar figures

Materials: Light work mat
1 strip with complex figures

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present the strip of figures directly in front of the learner with the first figure to the learner's left. Learner may hold as close as desired.
3. Point to the first figure on the learner's far left and say:

"Look carefully at this figure."

Pause for about 15 sec., then point to the other figures in the row and say:

"Show me the one that looks like the first figure.
Be sure it is exactly the same except for size."

Learner may choose to point, touch, or verbally indicate correct figure.

Response: *Learner selects figure with same inner detail.*

Developmental Level: 5-6 years.

Objective: *Learner will match letters and numbers embedded in design.*

Visual Task: Select symbols from patterned background

Materials: Light work mat
1 card (4 × 5) with letters and numbers embedded in mottled design
3 squares with the same letters on one side and numbers on the other side

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present sheet with letters and numbers permitting learner to hold as close as desired. Say:
"Look at this sheet of letters and numbers carefully."

Pause for about 15 sec, then give one letter square (M) to learner to be held as close as necessary. Say:
"Look at this letter."

Pause. Then say:

"Show me the same letter on the sheet. Find the one that looks exactly like it."

Learner may be able to identify letters and numbers verbally, but that is not required. Response may be made by pointing, touching, or placing correct square beside the letter or number.

3. Repeat direction #2 with the following letters and numbers in this order: 3 B 5 Y 4.

Response: *Learner selects correct letters and numbers to match models.*

Developmental Level: 4-5 years.

The *Visual Efficiency Scale* (Barraga, 1970) from which the DAP was developed has been translated into seven languages and used all over the world. Internal feedback suggests that development of visual functioning crosses racial, language, and cultural boundaries. Therefore, the assumption is made that the DAP may be used effectively with all low vision learners.

The DAP items were selected to include a representative sample of possible visual tasks within each of the eight categories of visual developmental milestones. For teaching purposes, these categories are called sections in the *Design for Instruction. A limited number of specific items from the Visual Efficiency Scale* (Barraga, 1970) were adapted for use in the present assessment procedure.

Reliability The DAP was administered twice to 112 legally blind students with an average of 2 weeks between pre- and post-assessments. The students ranged in age from 5 through 20 years; the median age being 10.5 years. Reliability estimates for the DAP were based upon internal consistency coefficients (i.e., Kuder-Richardson 20) and a correlation between preassessment and postassessment results. The reliability for the preassessment was $\bar{r} = .94$ and for the postassessment $\bar{r} = .96$. The test-retest correlation was $\bar{r} = .96$. For a full technical report see Berla, E., Rankin, E., & Willis, D. Psychometric Evaluation of the Low Vision Diagnostic Assessment Procedure. *Journal of Vision Impairment and Blindness*, 1980.

General principles of procedure Before beginning assessment the evaluator should consider the following steps and recommendations.

- If the introduction to the *Program to Develop Efficiency in Visual Functioning* has not been read carefully, the evaluator should do so before going further.
- It is recommended that the evaluator have formal training and/or experience with the low vision persons and with techniques of assessment. Inexperienced evaluators may find it necessary to work under the supervision of an experienced evaluator. Such inexperienced evaluators will find the *Source Book on Low Vision* to be a valuable aid.

- The evaluator should discuss the purposes and procedures of the DAP with the low vision persons and/or with their primary caregivers, whichever is appropriate. The purposes of such communication are to give factual information about evaluation and to reduce any anxiety which may be present.
- If possible, the evaluator should obtain written parental or guardian consent prior to assessment of children.

- The evaluator should choose as a setting for assessment a place that the learner is accustomed to and in which there is a feeling of ease and comfort.
- In scheduling the assessment, the evaluator may expect to plan for more than one session except for the more advanced learners. A variety of factors

- should be considered in determining the duration of sessions for each learner. (See Special Consideration for Various Populations that follows.)
- It is essential for the evaluator to establish and maintain rapport in order to motivate the learner and elicit optimal performance. (See Special Considerations for Various Populations.)
- If possible the evaluator and the learner should have a commonality of language and cultural experiences. An interpreter under the direction of the evaluator may be needed for effective communication.
- Evaluators should monitor their own behavior in adhering to uniform administration procedures as specified with each item.

- The evaluator should provide positive reinforcement of the learner's effort, attention, and cooperative behavior. Under no circumstances should the evaluator show dissatisfaction with a response.
- Consistency of goals, objectives, and approaches to visual behavior between the evaluator and other professionals working with the low vision learner is essential. In-service training of staff with the vision specialist will facilitate cooperation and follow-through to achieve the required consistency.

Special Considerations for Various Populations

Preschool learners Positioning of the very young child requires special attention. The child should be comfortable, yet the positioning should facilitate the direction of attention to the assessment activity. The child's developmental level and any physical problems will determine if the learner will be assessed in a supine, sitting, prone, or standing position, or in a combination of these at different times.

Interaction with the young child requires a delicate balance of active participation and restraint by the evaluator to focus and maintain the child's attention. Awareness of the child's fluctuating interest should tell the evaluator when to become more involved or when to pull back and permit the child to work independently. The evaluator's attire should be chosen to avoid distractions—loud colors, bright jewelry, and so on.

No time limit can be prescribed for the conduct of individual assessment sessions. The attention span of the young child may be long or short depending on developmental level, hunger, thirst, fatigue, anxiety, or medical conditions. Timing of assessment sessions should be planned to correspond with alert periods (e.g., shortly after meal or nap time). Assessment sessions should not be held when the child is ill or taking unusual medications. Interest level also affects attention span. The evaluator must take cues from the child's behavior in determining how long to sustain a session. Use of information from the accompanying Low Vision Observation Checklist and from the child's primary caregiver will assist in scheduling.

ITEM NO. 31

Objective: *Learner will match letters and numbers.*

Visual Task: Select like symbols

Materials: Light work mat
2 strips (letters, numbers)

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the strip with letters in front of learner with the first letter to the learner's left. (Learner may hold strip and bring as close as desired.)
3. Point to the first letter on the left and say:
"Look at this letter carefully."

After about 15 sec., point to the other letters in the row and say:
"Show me the one that looks just like the first one. Be sure it is the same."

4. Repeat direction #3 using the strip of numbers and substituting the word number(s) for letter(s).

Response: *Learner selects identical letter and number.*

Developmental Level: 4-5 years.

Objective: *Learner will copy abstract figures with straight and curved lines.*

Visual Task: Copy abstract figures

Materials: 2 picture cards (straight lines, curved lines)

1 page unlined white paper in Record Booklet
Broad-tipped ($\frac{1}{4}$ " [6 mm]) black felt nonpenetrating pen

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the paper and pen in front of learner. Present figure with straight lines. Orient it horizontally so that it does not resemble the number 5. Say:

"Look at this figure carefully."

Learner may hold closer if desired, but should not turn to a different position.

After about 15 sec. place the figure above paper and say:
"You may look at this whenever you want."

Call attention to the paper and pen and say:
"Draw a figure to look like this one."

3. Remove the straight line figure and present the figure with curved lines. Repeat direction #2. Be sure to orient the figure horizontally so that it does not resemble the letter S.

Response: *Learner draws each figure (with straight or curved lines) to resemble model presented. (Criteria for scoring in Record Booklet.)*

Developmental Level: 4-5 years.

The young child's acceptance of the evaluator and the assessment situation affects participation and interest. The initial approach should be gentle and inviting. It is wise to give a child time to become accustomed to the situation. A quiet friendly tone of voice will help to assure the child and establish and maintain rapport. The evaluator may wish to meet and talk with the child prior to assessment.

The evaluator also may wish to use some familiar toy(s) in getting acquainted with the child. *These toys should never be the same as any of the objects used during assessment.* The primary caregiver may be asked to bring a favorite toy for this purpose.

For some children, consideration may be given to participation of the primary caregiver. For example the caregiver might hold the child to provide security and perhaps to assist the evaluator. In such situations, caution should be taken to prevent the person from cueing the "correct" response or praising the child *only* for "correct" behavior. A preassessment conference should cover these cautions.

Multi-impaired, visually handicapped learners Regardless of age, the visually handicapped individual with additional impairments presents the greatest challenge to the evaluator. The evaluator may need to use nonverbal approaches and pay special attention to positioning. Concern for the special strengths and weaknesses and the attention span of each individual is always important. A mature individual with a motor/speech impairment may have a unique system of communication and should be encouraged to respond in an individual manner.

Interacting with and observing the multi-impaired learner prior to assessment is essential. A more flexible assessment procedure may be needed with such persons. Such an approach should be based on observations made during use of the Low Vision Observation Checklist rather than being based solely on medical diagnoses. Often evaluators have to look carefully for evidence of responses, for example, straining to turn the head to follow a light source or moving object. Here the evaluator's skills in observing and recording spontaneous behavior are exercised fully. Cautions against misinterpretation of responses cannot be overemphasized.

Multi-impaired persons may react negatively toward visually oriented activities. Outright rejection of visually presented objects is not uncommon. Prior to assessment, it would be well to accustom such persons to the assessment situation. Motivational procedures and materials similar to those employed during assessment may be used.

Because many multi-impaired, visually handicapped persons are unusually slow to respond to visual stimuli, ample time must be provided for a response. Repetition of the stimulus activity may be required.

Primary and middle-grade learners Some low vision learners within this age range—6 through 14 years of age—may be integrated already into regular classes

as braille readers or print readers. Regardless of the class placement or reading medium, these individuals should be given the DAP as a prelude to further development of visual use. The ability to read print does *not* preclude the need for further development in the use of low vision in other life activities. *No assumptions about an individual's visual efficiency should be made.* Concern for the learner's interest level and attention span continues to be necessary. As with younger children, the evaluator's attire should be chosen to avoid distractions.

High school and adult learners A comprehensive evaluation is as important for the low vision high-school person and adult as for the young child. Previous experiences of the individual in the use of vision for functional purposes may have been very limited. Therefore, these individuals should be given the entire DAP. Based on the results of the DAP, subsequent instruction may result in increased visual use at home, at work, and in the community.

Strong needs to be like peers and to have their approval often causes adolescents to reject large print textbooks and other materials helpful to them. Unsuccessful experiences in use of their vision may have contributed to a reduced effort in performing visual tasks. Such negative behavior may affect assessment. Because of this, the evaluator may need to encourage adolescents to attempt activities which have acquired negative connotations for them.

High schoolers and adults should be informed that their DAP performance does not indicate "success" or "failure." They should realize that expectations for their visual functioning may not change necessarily as a result of assessment.

Environmental Conditions

Guidelines for structuring the environment for assessment are provided in the DAP instructions with each assessment item. Some general environmental factors are

Control of distractions Environmental noises or other irrelevant stimuli compete with assessment tasks for the learner's attention. For some, the presence of excess noise makes it impossible to focus on the evaluator's instructions or the assessment materials long enough to perform the activities. Such interruptions as music, telephones ringing, and other loud sounds should be kept at a minimum. Visual distractions, such as objects and pictures in the room, the evaluator's colorful shirt or blouse, or a patterned working surface should be avoided also. Uncomfortable temperatures can divert attention, as can unusual odors. The learner's own movements can be a source of distraction if unusual actions are required in the activities.

Lighting Light influences what the person sees. Visual tasks in the DAP should be performed under lighting conditions favorable to each learner. Information on lighting preferences and habits obtained from the Low Vision Observation

ITEM NO. 29

Objective: *Learner will match abstract figures by single inner detail.*

Visual Task: Select abstract figure by distinctive inner detail

Materials: Light work mat
1 strip with 5 abstract figures

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat surface. Be seated directly across from the learner.
2. Present strip of figures directly in front of learner with first figure on learner's left. Learner may hold in any position to make it easier to see. Point to the first figure and say:
"Look at the first figure carefully."
Pause for 15-20 sec. Then, while pointing to direct the learner's attention to the other figures, say:
"Show me the figure over here that looks like the first one. Be sure it is the same."
Point to it again.

Response: *Learner selects abstract figures with identical detail.*

Note: In all of the items that follow, magnification may be used when appropriate or as learner desires. When used, the fact should be indicated on the Record Booklet. (If learner is not accustomed to using magnification, no attempt should be made to teach use as part of the assessment procedure).

Developmental Level: 4-5 years.

Objective: *Learner will identify action in pictures and arrange in sequence.*

Visual Task: Identify sequence of action in pictures

Materials: Light work mat
4 picture cards: a. girl walking along carrying book
b. girl approaching building
c. girl entering door to room
d. girl sitting at desk with open book

Directions:

1. Choose a quiet area with favorable lighting and a flat working surface. Be seated directly across from the learner.

2. Arrange the 4 pictures in mixed order (c, a, d, b) in front of learner and say:

"Look at these pictures carefully."

Pause for learner to examine pictures which may be held as close as desired. Say:

"Tell me what is happening in each one."

Accept what learner says, even if not accurate. Then say:
"Put these pictures in a row so that they tell a story. Show me which one comes first, then next, and so on."

Response: *Learner tells what is happening in each picture. Learner places pictures in sequence (a, b, c, d or d, c, a, b)*

Developmental Level: 3-5 years.

Checklist and reports from persons working with the individual will enable the evaluator to provide favorable lighting conditions for each learner. For example, if one learner prefers diffused white light at a low level of intensity and another prefers high intensity light directed from the left, then these conditions should be provided during assessment unless otherwise indicated in the instructions in the DAP.

Location The DAP is designed to be administered indoors under conditions optimal for each learner. However, assessment for some visual tasks also may be done outdoors to secure additional information. An orientation and mobility instructor (if one is available) should be consulted before making extensive assessment of low vision learner's performance outdoors. Information from the Low Vision Observation Checklist will be helpful.

Psychological variables Attitudes, beliefs, values, and assumptions of both the evaluator and the low vision learner affect the outcome of the diagnostic evaluation. The evaluator should think about his or her preconceptions concerning low vision and visual development. The evaluator needs to be sensitive to the fact that such impressions can influence the evaluation process in subtle but profound ways. An evaluator's attitudes toward assessment per se should be considered also. The belief that assessment of low vision has little value may predispose the evaluator to deviate from uniform procedures. Deviations may limit the general applicability of the findings. *It must be emphasized that the low vision person's attitudes about the assessment situation, the evaluator, and the very process of seeing influence performance.* As has been stated in the introduction to the entire program, some low vision individuals may not realize that they can see, or they may lack understanding of what seeing means or they may resist looking because of past frustrations. Consideration of these psychological variables by the evaluator and, in some cases, limited discussion with the learner may facilitate the assessment.

Administration

Sequence The process of administration should be completed in the following sequence: (a) Low Vision Observation Checklist; (b) Diagnostic Assessment Procedure items, recording performance in the Record Book at completion of each item; (c) Summary Table; and (d) Instruction Planning Index.

Low Vision Observation Checklist The Low Vision Observation Checklist (LVOC) is a behavioral checklist to be completed prior to assessment with the DAP. Observations are made both indoors and outdoors; some may be made at night. The observer indicates environmental conditions and visual behaviors. Sections include questions regarding attitude toward vision, use of vision, approach to visual tasks, light preferences, and use of visual aids. Information obtained from use of the LVOC is necessary in structuring the environment and scheduling the DAP assessment.

Contents of the DAP The DAP consists of criterion-referenced assessment items, a packet of Record Booklets, and specified materials. Each assessment contains (a) the objective; (b) the visual task; (c) required materials; (d) detailed directions for administration; (e) a behavioral description of the response required for mastery; and (f) approximate developmental level. An assessment item may have a note related to adaptive administration of the item and/or a diagram to demonstrate presentation of the item.

The Record Booklet contains a space for the learner's pertinent demographic information; a checklist format for recording mastery or nonmastery of all portions of each item; adequate space for the examiner's observational notes; and a Summary Table.

Materials Most concrete materials and all pictures and symbolic materials necessary for assessment are included with the program. All materials needed for any given session should be assembled and arranged prior to the session so that they are out of sight and reach of the learner but easily accessible to the evaluator. After each session, care should be taken to return all materials to the case and to arrange them in their exact order so that they will be readily available for subsequent use in reassessment. (**None of the materials should ever be used for instructional purposes.**)

Presentation of items The DAP is to be administered individually. Begin assessment with Item No. 1. Carefully follow the specific directions given for each item and record the learner's mastery or nonmastery and the specified information indicated in the Record Booklet.

Although a learner should not be rushed, judgment will need to be exercised in regard to a reasonable period of time to wait for response. Deliberate, careful looking takes time. When the vision is very low, several sessions on one item may be necessary. Evaluators need to avoid giving any assistance or performing any teaching activities during assessment.

The evaluator may expect a scattering of success in visual tasks on the assessment items. Because of this, it is necessary to administer *all* items to *all* learners except in extreme cases, for example, very young children or severely multi-impaired, visually handicapped individuals. With young children, as assessment approaches the reading readiness level, the developmental level of the learner will determine whether or not an item is appropriate. The visual behavior and developmental level of the learner and the judgment of the evaluator will determine the point at which to terminate assessment. When it becomes obvious to the evaluator that the learner can proceed no further either physically, visually, or cognitively, the evaluator must stop.

Evaluation of Responses The correct responses are specified for each item. Mastery equals 100% correct on each item. If the item requires more than one response, *all* responses must be correct for mastery. Any incorrect response with-

ITEM NO. 27

Objective: *Learner will select specified object from pictorial scene.*

Visual Task: Match single object picture to like element of complex picture

Materials: Light work mat
1 picture card (4 × 5) with animals
1 square with picture of animal

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Show larger picture to learner and say:
"Look at this picture carefully."

Pause for learner to examine the picture. Show smaller (single object) picture to learner and say:
"Show me something in the big picture that looks like the little one. Be sure it looks exactly the same."

Learner may give name of object, but is not required to do so. Response may be indicated by pointing, touching or naming.

Response: *Learner indicates specific object in pictorial scene.*

Developmental Level: 3-5 years.

in an item equals nonmastery. A plus (+) should be used to indicate mastery; a minus (–) should be used to indicate nonmastery.

The learner should be allowed to self-correct mistakes during a response and then receive credit for mastery. If more than one visual response is required in an item, each response is scored for mastery or nonmastery. Remember, mastery of an item requires achievement of mastery on every visual response. Scoring involves strict adherence to the specifications of each particular response.

Avoidance of the halo effect is essential. Each response must be judged on its own merits without regard to other successes or failures. The evaluator must guard against permitting the determination of mastery versus nonmastery to be influenced by any preconceived notions or general impressions of the learner's visual efficiency. Decision of mastery must not be tempered by any conviction that the person could have answered correctly if "really trying;" the task is to record the response which has actually been given. The halo effect will be reduced by recording mastery or nonmastery for each item immediately after the learner has completed the response.

Record Booklet The Record Booklet is designed to help the evaluator record quickly and in detail the learner's performance as well as the evaluator's observations. Boxes are provided for recording responses. An observational guide to the learner's attitudes toward tasks is included in the Record Booklet. Space is provided with each item to record information regarding the learner's (a) approach to task; (b) pertinent verbal remarks; (c) behaviors which enhance or interfere with visual performance; (d) use of low vision aid, type of aid, and manner of use; and (e) distance variations for each item. Subtle but significant behavior patterns of the learner should be observed and recorded.

Accurate recording is important since the recorded mastery or nonmastery will serve as the basis for use of the Instruction Planning Index. (See Use of Assessment data that follows.)

Informing the learner that his responses will be recorded is generally advisable, particularly with older learners. Use of the Record Booklet should be as casual and unobtrusive as possible with no revealing comment of any kind to the learner.

Use of Assessment Data

Summary Table The Summary Table is arranged to show at a glance the learner's mastery or nonmastery of each assessment item. The evaluator records a plus (+) for each item on which the learner demonstrated mastery of every required visual response, and a minus (–) for each item on which partial or total nonmastery was demonstrated. Information from the Summary Table, the LVOIC, and specific data from the Record Booklet, serve to guide the evaluator and low vision instructor in use of the Instruction Planning Index. After completion

Objective: Learner will assemble picture puzzles.

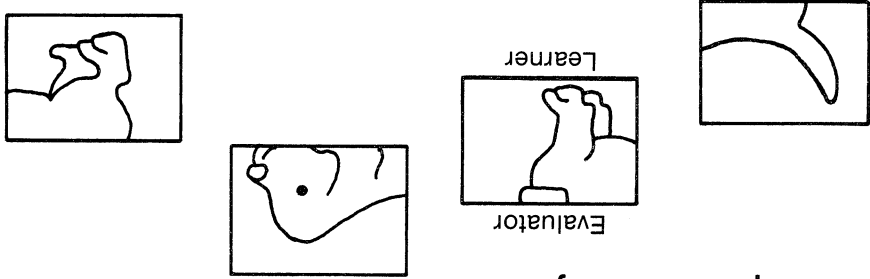
Visual Task: Assemble picture parts

Materials: Dark work mat
2 picture puzzles: (a) dog (b) house
Timepiece

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place pieces of the dog puzzle as shown in the diagram in front of learner. Say:

"When you put these pieces together, they make a picture of something you know. Look at the pieces carefully."

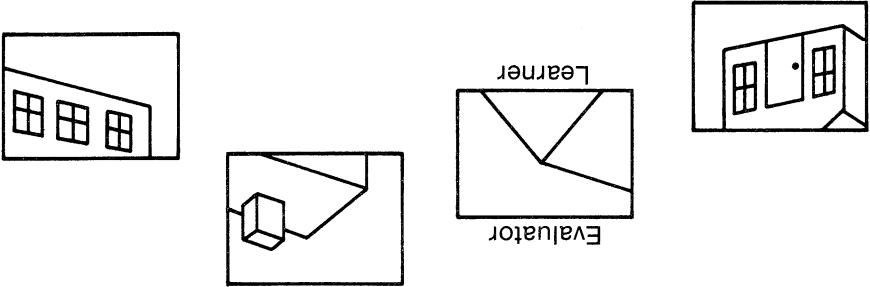


Pause for the learner to examine the pieces visually. Learner may pick up and hold close if desired.

Then say:

"Put the pieces together to make a picture."

3. Remove the dog puzzle and lay out the pieces of the house puzzle as shown in the diagram. Repeat direction #2.



Response: Learner arranges pieces of each puzzle in correct position and close together. Pieces do not have to touch each other necessarily if placed in proper relationship to other pieces. Maximum time for each puzzle: 5 minutes.

Developmental Level: 3-5 years.

tion of the Summary Table, one can tell immediately the items which were not mastered in the assessment procedure.

Instructional Planning Index This Index is a guide to analyzing performance on assessment items in relation to the type of instruction needed by learners. The Index is thus a guide for the teacher in determining the Section(s) in which instruction is needed. For each assessment item, the lessons within the Design for Instruction related to the visual task are indicated. Lessons in the Design for Instruction are grouped into Sections that correspond to the categories of visual development. A learner who shows nonmastery on the task covered in an item will need instruction within the Section (category) or Sections (categories) that provide readiness for the task or lead directly to the skills needed for the task. For example, the learner who is unable to track a moving object in continuous pursuit (Item 4) will need instruction in tasks which promote development of this skill (Section B).

All persons who have been involved in the analyses of the data on the Low Vision Observation Checklist and the Record Booklet and in discussion of the Instructional Planning Index, should be consulted before postassessment instruction of a learner begins.

Feedback and rechecking The performance of a learner on assessment items may be discussed with parents, teachers, and eye specialists. Performance of adults and more advanced learners should be also discussed directly with them. Reassessment may be indicated after new or different refractive or visual aids have been prescribed or changes in visual conditions have occurred. A chart relating assessment items to lessons in the Design for Instruction follows. Note that the items and lessons are listed under Sections that correspond to the eight categories of visual development.

If visual functioning was limited during the initial assessment procedure, reassessment may be quite useful after a period of instruction of at least 3-6 months. In some learners, efficiency in functioning continues to be minimal, whereas, others may show dramatic increases in visual functioning.

The plan for future instruction needs to be based on the progress pattern shown over time, and continued reevaluation may be appropriate over a period of years for slowly maturing learners. In any case, reassessment would not be appropriate in less than 6 months, and usually not in less than 1 year.

ITEM NO. 25

Objective: *Learner will identify object partially hidden in picture.*

Visual Task: Identify object in picture from partial elements

Materials: Light work mat
1 picture card showing partially hidden object

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Show picture to learner to be held as close as desired. Say:
"Look carefully at this picture."

Pause for 15-20 sec. Then say:

"What is behind the door?"

Response: *Learner names partially hidden object (e.g., man, doll, boy, person, etc.).*

Developmental Level: 3-5 years.

Objective: Learner will recognize specific objects in pictures.

Visual Task: Select single elements in pictures

Materials: Dark work mat

2 picture cards (outdoor scene, indoor scene)

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.

2. Place outdoor picture in front of learner to be held as close as desired. Say:
- “Look carefully at this picture. Look at everything in the picture.”
- Pause for about 15-20 sec. Then say:
- “Show me the tree.”
3. Say:
- “Now show me the dog.”
4. Repeat directions #2 and #3 using indoor picture. Ask learner to show first the *table* and then the *flowers*.

Response: Learner selects each object.

Developmental Level: 2-4 years.

- C Through exploration and manipulation, discriminate, recognize, and use concrete objects for intentional purposes.
7. (23) Learner will see two lines and move between them.
8. (27) Learner will place blocks in same position as model.
9. (32) Learner will connect dots to form straight and curved lines.
10. (35) Learner will match geometric shapes.
11. (39) Learner will discriminate missing parts.
12. (45) Learner will observe model and position blocks similarly.
- D Discriminate and identify shape and detail in objects, pictures of objects, people, and actions.
13. (49) Learner will discriminate primary colors.
14. (51) Learner will match solid color geometric shapes in pictures.
15. (54) Learner will match objects by size and length.
16. (60) Learner will match geometric outline pictures and solid color object pictures.
17. (64) Learner will draw outline of geometric shapes from memory after looking at model for 15 seconds.
18. (70) Learner will identify outline pictures of objects in varying sizes.
19. (73) Learner will place objects to match pictured arrangement.
20. (78) Learner will select pictures to match objects.
21. (84) Learner will match pictures by inner detail.
22. (87) Learner will identify and classify pictures of objects.
23. (90) Learner will observe pictures and position object to match.
24. (93) Learner will recognize specific objects in pictures.

- A Show awareness of visual stimuli and give indication of receiving visual information.
1. (2) Learner will turn eyes, head, and/or body to light source.
2. (7) Learner will react to visual object.
- B Develop and strengthen voluntary control of eye movements. Begin to select and discriminate concrete objects in colors and distinct shapes.
3. (11) Learner will look from one light to the other.
4. (14) Learner will follow a moving light in continuous visual pursuit.
5. (18) Learner will locate object visually and move to it.
6. (20) Learner will roll ball, watch it, and move to stationary ball.

13. (49) Learner will discriminate primary colors.
14. (51) Learner will match solid color geometric shapes in pictures.
15. (54) Learner will match objects by size and length.
16. (60) Learner will match geometric outline pictures and solid color object pictures.
17. (64) Learner will draw outline of geometric shapes from memory after looking at model for 15 seconds.
18. (70) Learner will identify outline pictures of objects in varying sizes.
19. (73) Learner will place objects to match pictured arrangement.
20. (78) Learner will select pictures to match objects.
21. (84) Learner will match pictures by inner detail.
22. (87) Learner will identify and classify pictures of objects.
23. (90) Learner will observe pictures and position object to match.
24. (93) Learner will recognize specific objects in pictures.

F Remember detail of complex pictures and patterns. Relate single parts to whole. Discriminate figure from background in near-distant perspective.

25. (97) Learner will identify object partially hidden in picture.

26. (100) Learner will assemble picture puzzles.

27. (102) Learner will select specified object from pictorial scene.

28. (107) Learner will identify action in pictures and arrange in sequence.

F Discriminate, identify, and reproduce abstract figures and symbols.

29. (109) Learner will match abstract figures by single inner detail.

30. (112) Learner will copy abstract figures with straight and curved lines.

31. (115) Learner will match letters and numbers.

32. (120) Learner will match letters and numbers embedded in design.

G Discriminate, identify, and perceive relationships in pictures, abstract figures, symbols.

33. (126) Learner will relate inner detail in figures of different size.

34. (131) Learner will copy upper and lower case letters in manuscript and in script.

35. (137) Learner will select word card to match word seen at a distance.

36. (141) Learner will match words by type styles.

H Identify, perceive, and reproduce single and combined symbols.

37. (142) Learner will identify letters in different types.

38. (144) Learner will write letters and numbers from dictation.

39. (147) Learner will match words to pictures.

40. (150) Learner will read single words.

ITEM NO. 23

Objective: Learner will observe pictures and position object to match.

Visual Task: Match object position with picture

Materials: Light work mat

2 picture cards (doll sitting with hands above head, doll standing with hands down at sides)
Doll

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Present picture with hands above head to learner permitting it to be held as close as desired. Say:

“Look at what the doll is doing in this picture.”

Pause, then lay the doll in front of the learner. Say:

“Make your doll do what the doll in the picture is doing. I’ll leave the picture here for you to look at.
Tell me when you’re finished.”

3. Without repositioning doll, repeat direction #2 with the picture showing arms down at sides.

Response: Learner positions doll as shown in pictures.

Note: Learner may handle doll only to place in position.

Developmental Level: 2-4 years.

ITEM NO. 22

Objective: *Learner will identify and classify pictures of objects.*

Visual Task: Identify and categorize pictures

Materials: Light work mat
8 picture cards: 3 with pieces of clothing, 2 with toys, 3 with foods

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Spread all 8 cards in front of the learner in jumbled order with no pictures overlapping. Orient all pictures in appropriate position for learner. Say:

“Look at every one of these pictures and tell me the name of what you see. You may pick them up if you like.”

Record the name learner gives to each.

3. After learner has given a name to each picture (whether correct or not) spread out all the pictures and say:
“Show me the things that can be used in playing. Put all the toys together.”

- The manner of response may be chosen by learner such as: pick up and hand to evaluator; put in a group on working surface; simply name object and indicate picture and name appropriate group.
4. After learner has grouped the toys and response has been noted, shuffle toys among other pictures. Then say:
“Show me the things that can be worn. Put all the clothes together.”
 5. When the learner has finished grouping clothing and response has been noted, shuffle clothing among other pictures and say:
“Show me the things that can be eaten. Put all the food together.”

Response: *Learner names each picture. Learner groups pictures correctly as toys, clothes, or food.*

Developmental Level: 2-4 years.

Assessment Items

ITEM NO. 21

Objective: *Learner will match pictures by inner detail.*

Visual Task: Select pictures by distinctive inner detail

Materials: Light work mat

2 strips with pictures (cars, faces)

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the strip with cars directly in front of the learner and point to the picture at the learner's far left.

Indicate that learner may hold closer if desired. Say:

"Look carefully at this picture."

Pause. Then while pointing to direct the learner's attention to the other pictures, say:

"Show me the picture over here that looks like the first one. Be sure it looks exactly the same."

3. Remove cars and repeat direction #2 using faces.

Response: *Learner selects pictures with identical detail.*

Developmental Level: 2-4 years.

Materials Needed but Not Included in Kit

Large bright colored object such as beach ball or chair

Broad-tipped (1/4" [6 mm]) black felt nonpenetrating pen

Fine-tipped black felt pen

Timepiece

Measure for determining distance

Objective: *Learner will select pictures to match objects.*

Visual Task: Match objects and pictures

Materials: Light work mat
Toy car, doll
2 strips: 1 with pictures of large truck, medium truck, taxi, car;
and 1 with woman, fireman, football player, doll

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the car in front of the learner oriented as on strip. Say:
“Look carefully at the car.”

Pause for learner to look. Then present the strip of pictures with the car and permit learner to hold as desired. Beginning on the learner’s left, point to each picture to direct attention to it. Say:

“Show me the picture that looks most like the car.”

3. Remove the car and the picture. Repeat direction #2 using the doll and the strip of pictures with a doll. Stand doll facing learner.

Response: *Learner selects correct pictures.*

Developmental Level: 2-4 years.

Visual Task: Respond visually to light

Material: Penlight

Directions:

1. Have the learner stand in a lighted room. Say:1
“Close your eyes. I’ll tell you when to open them.”
2. Hold the penlight 8-12 in. (20-30 cm) from learner’s face (aimed toward forehead).
3. Turn on light and say:
“Find the light and look at it.”

Turn off penlight after no more than 10 seconds. (If learner does not respond, switch the light off and on a time or two, or gently rotate, or move as close as 4-6 in. (10-15 cm) from the face.) Record response and distance.

4. Repeat directions #1 and #3 holding the light 8-12 in. (20-30 cm) from learner and aimed at forehead, but substitute the following penlight positions:
at learner’s stomach level.
to the side of learner’s left ear (at eye level).
to the side of learner’s right ear (at eye level).

in front of and 6-8 in. (15-20 cm) higher than learner’s head, even with center of body.

Response: *Learner moves eyes, head, and/or body in direction of light when held in five different positions in the visual field.*

Note: If learner is unable to respond, reduce the lighting in the room and repeat the entire item.

To avoid reactions to the clicking sound of the penlight being turned on, click the penlight on and off several times while you talk. As you do, be sure to mask the beam with your free hand so the learner will not see the light until step 3 in this item. Follow a similar procedure whenever using a penlight or penlights.

Developmental Level: 1-3 months.

Objective: *Learner will turn eyes, head, and/or body to light source.*

Visual Task: Respond visually to light

Material: Penlight

1. Have the learner stand in a lighted room. Say:1
“Close your eyes. I’ll tell you when to open them.”

2. Hold the penlight 8-12 in. (20-30 cm) from learner’s face (aimed toward forehead).

3. Turn on light and say:

“Find the light and look at it.”

Turn off penlight after no more than 10 seconds. (If learner does not respond, switch the light off and on a time or two, or gently rotate, or move as close as 4-6 in. (10-15 cm) from the face.) Record response and distance.

4. Repeat directions #1 and #3 holding the light 8-12 in. (20-30 cm) from learner and aimed at forehead, but substitute the following penlight positions:
at learner’s stomach level.
to the side of learner’s left ear (at eye level).
to the side of learner’s right ear (at eye level).

in front of and 6-8 in. (15-20 cm) higher than learner’s head, even with center of body.

Response: *Learner moves eyes, head, and/or body in direction of light when held in five different positions in the visual field.*

Note: If learner is unable to respond, reduce the lighting in the room and repeat the entire item.

To avoid reactions to the clicking sound of the penlight being turned on, click the penlight on and off several times while you talk. As you do, be sure to mask the beam with your free hand so the learner will not see the light until step 3 in this item. Follow a similar procedure whenever using a penlight or penlights.

Developmental Level: 1-3 months.

ITEM NO. 2

Objective: *Learner will react to visual object.*

Visual Task: Attend visually to object

Material: 4 in. (1 dm) diameter white and black disc with tabs

Directions:

1. Choose an area in a well lighted room so that the natural or artificial light source falls on disc. Sit directly across from the learner.
2. Give disc to learner and say:
"Look at this circle."
3. After a few seconds, say:
"Hand it to me. Close your eyes. I'll tell you when to open them."
4. Hold disc by handle directly in front of learner and 3 ft. (9 dm) from learner's face. Gradually move disc toward learner as you say:
"Open your eyes and look at my face. Tell me when you see the circle."

Response: *Learner indicates when circle is visible (e.g., reaches, points, verbalizes).*

Developmental Level: 1-3 months.

ITEM NO. 19

Objective: *Learner will place objects to match pictured arrangement.*

Visual Task: Observe picture and arrange objects to match

Materials: Light work mat

Toy car

Patterned ball

Medium sized yellow block

Doll

1 strip with pictures of same objects in proportionate size
Timepiece

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the 4 objects (shown in the picture) on the surface in jumbled order with none overlapping and the doll lying flat, not oriented as in the picture.
3. Hand the picture card to the learner to hold as close as desired.
Say:
"Look carefully at this picture."
After about 15-30 sec. say:
"Now put these things together just like they look in the picture. I'll hold the picture here so you can look at it if you need to."

Hold the picture upright so the learner may refer to it if desired.

Response: *Learner places objects in approximately the same relative position as objects in picture. (Maximum time: 5 minutes)*

Developmental Level: 2-4 years.

Objective: Learner will identify outline pictures of objects in varying sizes.

Visual Task: Identify object outlines

Materials: Dark work mat
1 sheet with outline shapes of hand, tree, toy car, and house

Directions:

1. Choose a quiet area with favorable lighting conditions and a flat working surface. Be seated directly across from the learner.
2. Place the page of pictures in front of learner indicating that it may be picked up and held as close as desired.* Say:
"Look at all the pictures on this page."

Pause. Then say:
"Name each picture as I point to it."

Begin with the top row and the picture on learner's left. Note distance and position sheet is held.

Response: Learner names each object picture as it is indicated. Learner need not indicate size of object pictures. (Self-correction *not* acceptable after pointing to next picture.)

***Note:** An occluder to expose only one picture at a time may be used if necessary or appropriate for learner.

Developmental Level: 2-4 years.

Objective: Learner will look from one light to the other.

Visual Task: Shift gaze

Materials: 2 penlights

Directions:

1. Have learner stand in a lighted room about 2 ft. (6 dm) from evaluator who is standing (or kneeling, if necessary).
2. Hold a penlight in each hand with arms extended full length to the side at about eye level to learner (a distance of about 4 ft. (12 dm) apart) Stand or kneel so that learner is midway between the lights (lights aimed toward learner's forehead).
3. Turn on the penlight held in the *left* hand. If learner does not look toward light spontaneously, say:
"Look at the light."

4. Simultaneously turn off the light held in the *left* hand and turn on the light held in the *right* hand. If learner does not look toward light spontaneously, say:
"Now look at the light."

If the learner does not respond with light held stationary, move gently in small circular pattern. If learner does not respond with lights at 2 ft. (6 dm), move to 1 ft. (3 dm) or less. Record the distance response was made. Maximum time to respond, 3 seconds for each position.

5. Repeat directions #3 and #4, but substitute the following pen-light positions:
evaluator's right arm at own chin level and left arm at own stomach level (vertical alternation).
evaluator's right hand at own right ear and left arm by side of own left hip (diagonal alternation).

Response: Learner makes distinct eye and/or head movements from light to light in horizontal, vertical, and diagonal directions.

Note: If learner is unable to respond, reduce the lighting in the room and repeat the entire item.

Developmental Level: 4-12 months.

ITEM NO. 4

Objective: *Learner will follow a moving light in continuous visual pursuit.*

Visual Task: Track moving object

Materials: Penlight

Directions:

1. Have learner stand in a lighted room facing evaluator.
2. Position penlight about 2 ft. (6 dm) from learner's face. Aim the light at learner's right shoulder.
3. Turn on the light and say:

"Look at the light."

Pause for the learner to respond. If learner has difficulty locating light in beginning, move around gently or switch it off and on a time or two until learner can fixate.

While moving the light at a steady, moderate rate toward the other shoulder across a path of about 18 in. (5 dm), maintain a distance of about 2 ft. (6 dm) between learner and light. If the learner is unable to track light at 2 ft. (6 dm), move to 1½ ft. (5 dm) or closer if necessary. Then say:

"Now follow it with your eyes. Keep looking at it as I move it."

4. Hold the light about 2 ft. (6 dm) or closer if necessary, from learner with light aimed at chest. Turn on light and say:

"Look at the light."

Pause for learner to respond. Then, while moving light briskly upward to a point above learner's forehead, a path of about 2 ft. (6 dm), say:

"Now follow it with your eyes. Keep looking at it as I move it."

Turn off light and note response.

5. Repeat direction #4 but begin with the light above evaluator's right ear. Move light in a path of about 2-3 ft. (6-9 dm) toward the evaluator's left hip.

Response: *Learner follows light for entire distance of motion in continuous pursuit horizontally, vertically, and diagonally by moving either or both eyes and/or head.*

Note: If the learner is unable to respond, reduce the lighting in the room and repeat the entire item.

Developmental Level: 4-12 months.

ITEM NO. 17

Objective: *Learner will draw outline of geometric shapes from memory after looking at model for 15 seconds.*

Visual Task: Draw shapes after looking at models

Materials: Dark work mat

3 cards with outline shapes (circle, square, triangle) used in #16
1 page unlined blank paper in Record Booklet
Broad-tipped (¼" [6 mm]) black felt pen nonpenetrating

Directions:

1. Choose a quiet area with favorable lighting and a flat working surface. Be seated directly across from the learner.
2. Lay the pen across the top (from learner's perspective) and the paper in front of the learner.
3. Hand learner the card with the outline of the circle on it and say:
"Look carefully at this picture. I'm going to take it away."

If learner does not seem to attend to the picture, the instructions "Look carefully at this picture. I'm going to take it away," may be repeated.

After about 15 sec. take the card from the learner and say:
"Now draw one on the paper just like the one you saw."

4. Repeat direction #3, first with the square, then the triangle.

Response: *Learner draws the circle, square, and triangle shapes to resemble closely the models in shape and approximate closure of lines. (Criteria for scoring in Record Booklet)*

Developmental Level: 2-4 years.

Objective: *Learner will match geometric outline pictures and solid color object pictures.*

Visual Task: Recognize outline pictures of objects

Materials: Light work mat spread vertically
11 cards: 6 with outline shapes (square, circle, triangle, diamond, crescent, oval) and 5 with same shapes in solid color

Directions:

1. Choose a quiet area with favorable lighting and a flat working surface. Be seated directly across from the learner.
2. Place geometric shape outlines in two rows of three each, leaving space for rows between and below them. Say:
"Look at each of these shapes."

Cards may be picked up and held closer if desired.

3. After about 15 sec., hand the learner a picture of an object (tree, football, etc.). Say:

"Look at this picture."

Pause for the learner to look. Say:

"Put each picture with the shape that it looks the most like."

4. Repeat direction #3 for each object picture.

Response: *Learner selects pictures of solid objects to match outline pictures.*

Developmental Level: 2-4 years.

Objective: *Learner will locate object visually and move to it.*

Visual Task: Select visually and move to distant object

Material: Large, brightly colored object (such as beach ball or chair) for which learner knows the name. (Object not included)

Directions:

1. With the learner not present, select a large familiar, colored object and move it to an unfamiliar position in the room or to an unfamiliar room.
2. Bring learner to the room. Stop about 12 ft. (37 dm) from object and say:

"Look all around the room for the _____."

If learner is unable to respond at 12 ft. (37 dm), position learner at 8 ft. (24 dm) or as close as 3 ft. (9 dm) from object if necessary. Note distance in Record Booklet.

Pause and wait for response. Then say:
"Point to it."

Pause for response. Then say:
"Go touch it."

Response: *Learner locates object visually and moves directly to it without hesitation.*

Note: Learner may crawl or wheel the chair if unable to walk, and should view object from that position.

Developmental Level: 4-12 months.

Objective: *Learner will roll ball, watch it, and move to the stationary ball.*

Visual Task: Maintain visual contact with object and move to it

Material: Patterned ball

Directions:

1. Provide favorable lighting conditions with no glare or direct sunlight. The floor surface should be unpatterned and moderately dark.

For very young learners or those in wheel chairs, the ball may be rolled on a 4-6 ft. (12-18 dm) table.

2. Give the ball to learner. Move about 12 ft. (37 dm), closer if necessary, in front of learner, stoop and say:

“Slowly roll the ball toward me. Watch it as it rolls.”

Evaluator does not move position nor reach out to touch or stop ball.

Note the response.

3. When the ball stops rolling, say:

“Come get the ball.”

Note the response.

Response: *Learner rolls ball, watches it, and moves to it when it stops.*

Developmental Level: 4-12 months.

Objective: *Learner will match objects by size and length.*

Visual Task: Match objects visually by size and length

Materials: Light work mat

- 3 small blocks (red, blue, and yellow)
3 large blocks (red, blue, and yellow)
3 long pegs (red, blue, and yellow)
3 short pegs (red, blue, and yellow)

Directions:

1. Choose a quiet area with a flat working surface and favorable lighting. Be seated directly across from the learner.
2. Arrange all 6 cubes with colors and sizes randomly mixed so that none are touching.

3. Say:

“Look at all the blocks.”

Emphasize the need to look carefully and to touch only one block at a time. Learner may lean as close as desired to see.

Pause. Then while pointing to a larger block of any color, say:

“Show me all the big blocks like this one.”

Learner may *not* tactually examine before making choice, but may choose own manner of showing response (pointing, touching, picking up, etc.).

4. Shuffle all blocks and repeat direction #3, but ask learner to find the *little* blocks.

5. Remove the blocks and spread out the six pegs with colors and lengths randomly mixed.

6. Shuffle all pegs and repeat directions #3 & #4, but ask learner to find the long pegs and short pegs.

Response: *Learner matches big blocks and little blocks and long pegs and short pegs.*

Developmental Level: 2-4 years.

Objective: *Learner will match solid color geometric shapes in pictures.*

Visual Task: Match pictures of shapes

- Materials:** Light work mat vertical position
12 picture cards: 4 circles (black, yellow, red, blue)
4 squares (black, yellow, red, blue)
4 triangles (black, yellow, red, blue)

Directions:

1. Choose a quiet area with a flat working surface and favorable lighting conditions. Be seated directly across from the learner.
2. Place the black square, circle, and triangle (with apex at top) directly in front of learner across the top from learner's left to right.

Evaluator



Learner

3. Spread the other 9 cards on the work mat in random order with no overlap. Triangles should have apex at top.
4. Point to the black square and say:
"Look at this square."

Pause. Then say:

"Put all the squares with this one." (indicate where learner is to put cards.)

Learner may pick up cards and hold them as desired. May repeat instructions one time for each presentation.

5. Replace the squares on the board in random order among the other cards.
6. Repeat directions #4 and #5 first with the circle and then the triangle.

Response: *Learner matches squares, circles, and triangles independently of color.*

Developmental Level: 2-4 years.

Objective: *Learner will see two lines and move between them.*

Visual Task: Locate path visually and move through it

Materials: 2 strips each of yellow or black ribbon (12 ft. (37 dm))

Directions:

1. Choose a smooth walking surface and place the ribbons to form two lines 6-8 ft. (18-24 dm) long and 18 in (5 dm) apart. (If surface is light, use black ribbon; if it is dark, use yellow ribbon.) For learners in wheel chairs or on crutches, place 12 ft. (37 dm) ribbons 1 ft. (3 dm) wider than width of the base of the wheel chair or crutches.
2. Have learner position self (or wheel chair) behind starting point, say:

"Look at the two lines in front of you. Walk (crawl or wheel your chair) between the lines. Do not touch the lines. Go all the way to the end."

If learner is able to walk but unable to see the line when standing, crawling is acceptable.
In noting response in Record Booklet, indicate whether learner walked, crawled or used wheel chair.

Response: *Learner moves the length of the path without touching either line.*

Developmental Level: 1-3 years.

Objective: *Learner will place blocks in same position as model.*

Visual Task: Observe objects and manipulate others to duplicate

Materials: Dark work mat

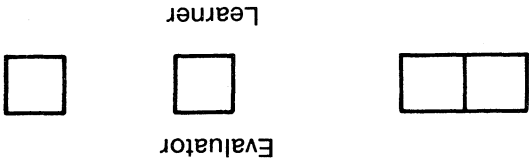
4 large yellow blocks

Directions:

1. Choose a quiet room with favorable lighting conditions. Be seated directly across from the learner.
2. Say:

“Watch what I do with the blocks. Do not touch the blocks, just look.”

3. Put 2 blocks side by side horizontally with sides touching and edges even as shown.



- Be sure to place the blocks close enough for the learner to see, but allow enough room for the learner to manipulate a second set of blocks.
4. Put 2 identical blocks in front of the learner about 6 in. (15 cm) apart. Say:
- “Now put your blocks just like mine.”**
- Point to the model just made.*

Response: *Learner arranges blocks to match model.*

Note: If the learner is multiply handicapped and the degree of motoric involvement is such that arranging the blocks like the model is not possible, the evaluator may offer assistance (e.g., holding one block in place while learner puts the other one next to it). Note the aid given.

Developmental Level: 1-3 years.

Objective: *Learner will discriminate primary colors.*

Visual Task: Match objects by color

Materials: Light work mat

3 circles (red, blue, and yellow)
3 squares (red, blue, and yellow)
3 triangles (red, blue, and yellow)

Directions:

1. Choose a quiet area with a flat working surface and favorable lighting conditions. Be seated directly across from the learner.
 2. Arrange the nine shapes on the work mat so that colors are distributed and no shapes are touching each other.
 3. Point to a blue shape and say:
- “Look at this shape. It is blue.”**
- To be sure learner is looking at the blue, evaluator may need to touch rather than point.
- Pause. Then say:

“Show me all the blue shapes.”

- Emphasize the need for learner to look carefully and to touch only one color at a time. Learner may lean as close as desired to see the color. Learner may choose own way of showing colors (pointing, touching, picking up, etc.).
- Shuffle the blue shapes among the others.
4. Repeat direction #3, but ask learner to find first the red shapes, and then the yellow shapes.

Response: *Learner matches all blue, red, and yellow shapes to models, independently of shape.*

Developmental Level: 2-4 years.

ITEM NO. 12

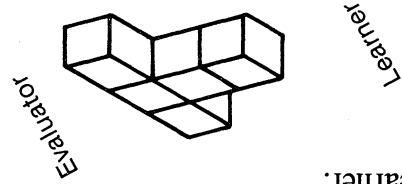
Objective: *Learner will observe model and position blocks similarly.*

Visual Task: Observe arrangement and manipulate objects to match

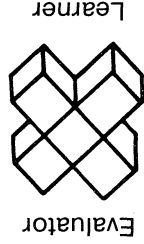
Materials: Dark work mat
10 small yellow blocks

Directions:

1. Choose a quiet area with favorable lighting and a flat working surface. Be seated directly across from the learner.
2. Say:
"Close your eyes and turn your head."
With 5 of the blocks, build a T design on learner's left, oriented toward learner.



3. Ask learner to turn around and say:
"Look at what I've made."
4. After about 15 seconds, put 5 blocks in front of learner in scrambled order and say:
"Put your blocks so they look just like mine."
Learner may not touch model before building design.
5. Scramble all the blocks. Repeat direction #2 but build an X design. Repeat directions #3 and #4.



Response: *Learner arranges blocks to resemble the model of a T and an X (all cubes adjacent and in same relative position and orientation).*

Developmental Level: 1-3 years.

ITEM NO. 9

Objective: *Learner will connect dots to form straight and curved lines.*

Visual Task: Observe and copy lines

Materials: Dark work mat
Page with black dots and lines in Record Booklet
Broad-tipped (1/4" [6 mm]) black felt nonpenetrating pen.

Directions:

1. Choose a quiet area with favorable lighting and a flat working surface. Be seated directly across from the learner.
2. Put the sheet with connected dots at top of page in front of the learner along with the felt pen. (Learner may hold sheet closer if desired). Point to the straight line connecting 3 dots, moving the finger across it and saying:
"Look at this line. See how it connects these dots."
Point to the 3 unconnected dots and say:
"Show me the dots you see here."
"Now I want you to draw a line to connect these dots to look like this one."
Point back to the model.
3. Repeat direction #2 with the 4 dots of the curved line.

Response: *Learner connects dots to form straight and curved lines resembling models. (Criteria for scoring in Record Booklet.)*

Developmental Level: 1-3 years.

Objective: *Learner will match geometric shapes.*

Visual Task: Match objects visually by shape

- Materials:** Light work mat
3 circles (red, blue and yellow)
3 squares (red, blue and yellow)
3 triangles (red, blue and yellow)

Directions:

1. Choose a quiet area with flat working surface and favorable lighting conditions. Be seated directly across from the learner.
2. Spread out all 9 geometric shapes randomly.
3. Point to a square (touch if desirable). Emphasize the need to look carefully. (Learner may lean as close as desired.) Say:

“Look at this square shape.”

Pause. Then say:

“Show me all the square shapes.”

Note the manner of response. Learner may choose own way of showing shapes (pointing, touching, picking up and giving to evaluator, etc.), but *may not examine tactually and may touch only one shape at a time.*

- Shuffle the squares among the other shapes (even if not moved).
4. Repeat direction #3, but ask learner to find circles, then triangles.

Response: *Learner selects all the square, circle, and triangle shapes without tactual exploration.*

Developmental Level: 1-3 years.

Objective: *Learner will discriminate missing parts.*

Visual Task: Recognize distinctive features visually

Material: Doll

Directions:

1. Choose a quiet area with favorable lighting and a table or desk. Be seated directly across from the learner.
2. Hold the doll under the table out of sight of the learner and remove the right arm.
3. Hold doll in front of learner at a distance of about 2 ft. (6 dm). If learner is unable to see doll at 2 ft. (6 dm), reduce distance to 1 ½ ft. (5 dm) or 1 ft. (3 dm), or closer. Say:
“Look at the doll.”

Pause for learner to look but not touch doll. Then say:
“Tell me what is missing. If learner responds “shirt or eye,” say “what else is missing?”

- If learner cannot respond by naming what is missing, pointing to the place where arm is missing is acceptable.
4. With the doll under the table, attach the arm and put a shoe on the right foot.
 5. Hold the doll upside down and repeat direction #3.

Response: *Learner points to appropriate area(s) or names missing part(s).*

Note: Learner may not touch or play with the doll.

Developmental Level: 1-3 years.