Save the Children - Cambodia

Manual for Screening

Cambodian Children for Disabilities
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Manual for Screening Cambodian Children for Disabilities

Objectives of this Manual

To provide both general and specific information on the content and methods used in the functional screening of school children for disabilities / functional limitations. The intended audience is head teachers, teachers, community members, health care workers, education officers, social workers and parents.

Background / Overview

At least 10% of any population in the world has some degree of functional limitation (disability) according to the World Health Organization (2011). The presence of Disabilities (disability) is one of the main reasons for adult under employment and why children either do not enroll in school or attend regularly. Or if they do attend, fall behind in school and ultimately drop out.

Disabilities have economic and social impact on the person and on the family and community in which they live. Disabilities lower the productivity, status and income in families. Identifying people with Disabilities is the first step in a long process to assisting the individual to overcome these limitations to the extent possible.

The types of disabilities that can be identified through this screening process are difficulties in seeing, hearing, remember, moving and communicating and to some extent behaving normally.
The reason for identifying children and adults with Disabilities is to provide required assistance at the youngest age possible in order to maximize the rehabilitation potential.

An easy to use and fast screening tool has been designed to identify functional limitations. With the help of skill-trained volunteers, teachers, health care officers others can screen individuals within a minute or less in schools, homes and in community screening camps. The tool has been designed to identify hidden conditions such as learning disabilities that often interfere with learning among school aged children. It also identifies more obvious limitations such as vision and hearing limitations among adults. The results of the screening test can be considered as provisional. Clinical judgments can only be made following a proper assessment of the problem.

The screening tool is conducted within seven testing stations (See Appendix 2) set up normally in a school using the compound outdoors, in the multifunction room, AV room or library. Procedurally, those participating in the screening carry their screening form from one station to the next and finally present their completed forms to the check-out table where their form is reviewed and the person is given an advise that indicates that no limitation was seen or that there could be a limitation and refers to them to appropriate service for further assessment and management.

The Objectives of the Screening Survey

✓ The primary purpose of the screening is to raise public awareness about the need to identify, accept and assist individuals with Disabilities at the earliest stages of their development.

✓ To identify school children and other community members who are experiencing functional limitations / disabilities.

✓ To provide immediate assistance or referral to individuals with disabilities

✓ To build island level capacities to continue the screening and referral process.

✓ To provide the government with accurate estimates of prevalence of Disabilities within each category for the purpose of planning and services deliveries.

✓ To create a database for monitoring purposes of those children and adults who have functional limitations
FAQs About the Functional Screening

Here are some of the more Frequently Asked Questions regarding the functional screening program.

Q. Who can be screened by this technique?

A. Anyone over the age of five if they can understand and follow the directions. For children under five interview questions of parents and caregivers can help the screening team decide what screening tests can be modified for use with a young child.

Q. How long does it take to conduct the functional screening?

A. The time depends on a few things such as the functional abilities of the respondent and the number of screening volunteers. Ideally, with eight skilled volunteers and two stations for the vision and hearing tests, around 60 students can be screened in a 45 minutes or less than a minute per student (without the draw a house tree and person test). Normally it would takes less than 2 minutes for a person to complete all tasks.

Q. How accurate are the results of the Screening?

A. It is fairly accurate because the visual screening test uses the internationally recognized E charts for near and far vision. The hearing tests is based also on international standards and the “Draw a House, Tree and Person test” is also well known, but should ideally be norm referenced in the country in which the testing is conducted. The major threat to reliability is the skills and attentiveness of the screening volunteer and Screening Technicians.

Q. Who is qualified to conduct the Functional Screening?

A. Anyone who is disciplined and has been trained for at least one hour should be able to conduct the screening. The interpretation should be done by someone with understanding of functional limitations. Usually the Screening Supervisor has at least an ‘A’ level qualification. The Screening Technician (supervisor) ideally should have an undergraduate degree in education with coursework in testing.

Q. What happens after the functional screening for those people who are referred?

A. The screening advice slip ideally refers a person to an appropriate place for further assessment. Consulting with the referred agency is up to the person (and their family) who is screened.

Costs and Time Required for the Screening

The cost of screening to the schools and / or communities is low and is especially good value when compared to the benefits. The unit cost is around $.10 (ten cents US$) per person. This cost is for photocopying two forms and the cost of the screening materials prorated amongst around 3,000 children and adults. The labour typically consists of 8 to 10 volunteers, teachers and health care workers.

The time required for screening varies according to the age of the persons screened and the skill levels of the screening personnel. At best one person can be screened in slightly over one minute and a half when using the seven station approach with two vision and hearing stations.
Typically one school of around 500 participants can be screened within one long day of nine hours if the screening team is well prepared in the procedure and the school and screening team are well organized. Otherwise the process can take up to two days or more.

Components of the Screening Test - *(see screening report form Appendix 1):*

1. Screening for Learning Problems (Cognitive Maturity and Cognitive Capacity) (SCMC)
   A. Digit Span -Motor, Memory Recall (Visual, Short-term Memory) Test *(MMR)*
   B. Digit Span- Auditory memory Recall (Auditory Short-term Memory) Test *(AMR)*

2. Screening for Specific Learning Problems (Processing Difficulties)
   A. Picture Auditory Discrimination Test (Expressive) – matches picture to word heard *(PADT)*
   B. Picture Visual Discrimination Test (Receptive) – Says the object pointed to *(PVDT)*
   C. Letter Visual Discrimination Test Cambodian letters (រ - ម / ឈ - អ) matching *(LVDTD)*
   D. Letter Discrimination and Directionality Test – (រ - ម / ឈ - អ) *(LDDT)*
   E. Letter Visual Discrimination Test English *(p q d b)* *(LVDTE)*

3. Speech and Communication Test
   Testing technician listens for speech / pronunciation on the above test items 2B and 2C

4. Screening for Physical and Movement Problems (PMT)
   Observes coordination, balance and general state of body parts and physical integration

5. Screening for Vision and Eye Problems (SVEP)
   A. Far sightedness (Snellen E Chart) *(FST)*
   B. Short sightedness (Snellen E reading card) and Khmer Reading Chart *(NST / KRC)*
   C. Eye problem – Inspection of the physical state of the eye

6. Screening for Hearing and Ear Problems (SHEP)
   A. Inspection of the Physical state of the Ear
   B. Auditory discrimination using a Pen Click Screening Test or pure tone testing device to match animal sound to a picture of the animal or use of a pure-tone audiometer.
Materials Needed for Screening and Costs (Check List for Materials)

The materials needed and cost involved to conduct the test are minimal once the kit is in place. One kit can provide screening for more than 20 schools. The expenses for recurrent and lost materials for each school is around $25. The materials needed for the screening kit are normally available locally. The only unique item to be imported is the sound game that is available from Melbourne Australia at around $15 each. The retail price is around $25 per piece. Contact Janusz Zera at Januszer@bigpond.com or Januszer@alphawave.com.au. Two animal sound games may not be necessary but will ensure faster screening if two lines for screening of hearing are moving at once. The other costly item is the cassette tape player used to rehearse the animal sounds for the hearing test. The player costs $7. Tapes of the animal sounds need are produced by simple hand held recording methods. Typically two or three charts of animals need to be replaced after each school. The detailed list is provided below:

<table>
<thead>
<tr>
<th>Item</th>
<th>Rial</th>
<th>US$ ($@12.75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kit box (best store location)</td>
<td>6.75</td>
<td></td>
</tr>
<tr>
<td>Ball pens x 10</td>
<td>2.75</td>
<td></td>
</tr>
<tr>
<td>Pencils with erasers x 10</td>
<td>1.22</td>
<td></td>
</tr>
<tr>
<td>Pencil sharpener x2</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>Cutting board and box cutter knife</td>
<td>3.57</td>
<td></td>
</tr>
<tr>
<td>Ruler x2</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>E Eye charts (distance) in paper x 2 and one plastic for demonstration</td>
<td>1.41</td>
<td></td>
</tr>
<tr>
<td>E chart Pointers x 4</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Blue Tack x 1 packet</td>
<td>1.41</td>
<td></td>
</tr>
<tr>
<td>E Eye charts (near) laminated x 2</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Khmer Reading Eye charts (near) laminated x 2</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Eye patch to cover eye x4</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>Animal Sound production device x 2 ($15) (Melbourne, Australia)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Tape and small walkman type tape player for animal sound game X 1 (Target store Male')</td>
<td>7.53</td>
<td></td>
</tr>
<tr>
<td>Extra AA Eveready gold batteries for tape player and otoscope and hearing aids x 4</td>
<td>0.94</td>
<td></td>
</tr>
<tr>
<td>Masking tape x 2 rolls</td>
<td>2.12</td>
<td></td>
</tr>
<tr>
<td>String 6 meters Long x 1</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Clip boards x 2</td>
<td>3.16</td>
<td></td>
</tr>
<tr>
<td>Staplers and extra staples X 2</td>
<td>1.88</td>
<td></td>
</tr>
<tr>
<td>Paper fastener clips X 50</td>
<td>2.98</td>
<td></td>
</tr>
<tr>
<td>Khmer letters Chart and small letters for matching X 2 each</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Marker</td>
<td>0.94</td>
<td></td>
</tr>
<tr>
<td>Scissor</td>
<td>1.09</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td></td>
</tr>
</tbody>
</table>
Items Found in the Basic Screening Kit (December 2014)
Save the Children – IKEA Soft-toys - Program for Inclusive Education

Contents of the School Children Screening Kit (By Station)

<table>
<thead>
<tr>
<th>#</th>
<th>Station # / Test Name</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Memory Fingers Number Recall</td>
<td>Need only fingers and 4-2 or 5-1 numbers on report form</td>
</tr>
<tr>
<td>2</td>
<td>Numbers Recall</td>
<td>Number series listed on report form</td>
</tr>
<tr>
<td>3</td>
<td>Auditory Processing</td>
<td>Card with visuals</td>
</tr>
<tr>
<td></td>
<td>- Expressive:</td>
<td>Bei, Srey or Trey</td>
</tr>
<tr>
<td></td>
<td>- Receptive:</td>
<td>Cha / Caa / Chor / Chhor</td>
</tr>
<tr>
<td>4</td>
<td>Visual Discrimination</td>
<td>p q b d matching cards</td>
</tr>
<tr>
<td>5</td>
<td>Coordination / Balance</td>
<td>Stick / chalk to make Line on the floor or in the dirt</td>
</tr>
<tr>
<td>6</td>
<td>Near Vision</td>
<td>Sight occluder (patch), pointing stick, near vision E card</td>
</tr>
<tr>
<td>7</td>
<td>Far Vision</td>
<td>Sight occluder (patch), pointing stick, Far vision E Snellen card and 6 Meter piece of measuring string Marker line on floor or on the ground</td>
</tr>
<tr>
<td>8</td>
<td>Hearing</td>
<td>Ball point retractable Pen that is provided</td>
</tr>
<tr>
<td></td>
<td>- Pen Click Test</td>
<td>Animal sound maker and animal picture card</td>
</tr>
<tr>
<td></td>
<td>- Animal Sound Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For All</td>
<td>Most recent version of Screening report form</td>
</tr>
</tbody>
</table>

The Importance of Follow-through and Provision of Assistance

The screening survey is the beginning step in a longer walk towards community inclusion of children with disabilities. **Warning:** screening for disabilities raises hope and expectations that once an impairment is identified, something will be done to help the child manage the problem so she can attend school and be part of community life. Part of the Screening project is developing a pathway for effective referral and follow-up measures. This has implications for government agencies that responsible for providing assistance to individuals with needs.
Table One describes the relationship between conditions found and follow-up strategies required.

**Table One: Relationship Between Screening Subtests and Follow-up Treatment Including Assistive Devices**

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Referred for Possible Problems</th>
<th>Referral Point along a referral chain</th>
<th>Assistive Devices and Adaptations Possibly Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E Vision Test (Near)</strong></td>
<td>Refractive errors (slight to moderate), severe - low vision or blindness</td>
<td>Optometrist, Ophthalmologist, Special Educator</td>
<td>Eye glasses, Low Vision Devices, Large print text, orientation mobility devices, surgery, special education and Braille</td>
</tr>
<tr>
<td><strong>E Vision Test (Far)</strong></td>
<td>Refractive errors (slight to moderate), low vision severe or blindness</td>
<td>Optometrist, Ophthalmologist, Special Educator, Rehabilitation specialist</td>
<td>Eye glasses, Low Vision Devices, Large print text, orientation mobility devices, surgery, special education and Braille</td>
</tr>
<tr>
<td><strong>Eye Inspection</strong></td>
<td>Conjunctivitis other eye infections astigmatism, lazy eye, cataract, glaucoma</td>
<td>Nurse, Doctor, Ophthalmologist, Special Educator</td>
<td>Medication, Vitamin Therapy, Surgery if indicated.</td>
</tr>
<tr>
<td><strong>Animal Sounds Hearing Test</strong></td>
<td>Hearing loss Mild Moderate Severe or profound (Deaf)</td>
<td>Doctor, ENT Doctor, Special Educator, Other Deaf community members, Speech Therapists</td>
<td>Hearing aid from medium to high power</td>
</tr>
<tr>
<td><strong>Ear Inspection</strong></td>
<td>Middle ear infections, deformed ears</td>
<td>Nurse, Doctor, ENT Doctor,</td>
<td>Medication, Possible surgery, dry mopping</td>
</tr>
<tr>
<td><strong>Walk the Line</strong></td>
<td>Middle ear or other sinus infections, CP, other coordination problems</td>
<td>Nurse Doctor, ENT Doctor, Physiotherapist Orthopedic Doctor, Occupational Therapist</td>
<td>Braces, crutches, calipers, wheelchair, adaptive seating, adaptive writing and other assistive technologies, physiotherapy, surgery special accessibility</td>
</tr>
<tr>
<td><strong>Full Body Check</strong></td>
<td>Missing or deformed limbs, fingers, etc. and other physical or movement problems</td>
<td>Nurse Doctor, ENT Doctor, Physiotherapist Orthopedic Doctor, Occupational Therapist</td>
<td>Braces, crutches, calipers, wheelchair, adaptive seating, adaptive writing and other assistive technologies, physiotherapy, surgery special accessibility</td>
</tr>
<tr>
<td><strong>Speech Word recognition</strong></td>
<td>Speech clarity and articulation and visual discrimination</td>
<td>Special Educator, Psychologist, Psychiatrist</td>
<td>Special education</td>
</tr>
<tr>
<td><strong>pdqb (writing)</strong></td>
<td>Directionality and visual discrimination</td>
<td>Special Educator, Psychologist, Psychiatrist</td>
<td>Special education</td>
</tr>
<tr>
<td><strong>Khmer letters Sound recognition and discrimination (Points)</strong></td>
<td>Speech recognition and auditory and visual discrimination, Attention deficit / hyperactivity</td>
<td>Special Educator, Psychologist, Psychiatrist, Speech Technician / Therapists</td>
<td>Speech therapy, special education</td>
</tr>
</tbody>
</table>
Introduction to the Screening Procedure

In order to maintain efficiency and therefore practicality of the screening procedure, speed and accuracy are important elements. Each child who passes through the screening process should be screened on average within 1 minute and 15 seconds using two sounds on the animal sound matching game and 2 ‘Es’ on “E” charts. Therefore, at least one or two classes of around 50 participants can be tested in one hour.

Organizing the screening survey

The smooth running of the screening depends on advance planning, organization as well as motivated volunteers and cooperative school, health and social welfare workers, as well as community volunteers. The following basic check list of organizational steps has guided the screening survey. Past experience has taught screening organizers to refer to this checklist and tick these boxes at least 3 to 5 days in advance. The stepwise procedure is detailed in Table Two.

Table Two:  Procedural Check List for Visits to Schools

✓ Send official letter from Chief or person in charge to inform of the visit, its purpose and to request accommodation at guest house and to inform others about the screening

✓ Send official letter from MoEYS to Health Centres / Hospitals to inquire about existing list of people who are experiencing difficulties. If this does not exist to request its preparation

✓ Send official letter to the Education personnel and Head of school to inform about the screening in primary and secondary schools and preschools and ask for specific support including photocopying and use of classroom and volunteers.

✓ Organize transportation to screening sites

✓ Organize through phone calls, the schedule for screening in schools, community screening camp and home visits
  o Prepare all materials for the screening – see below
  o Organize the 3 hour workshop on the Inclusive Education Manual

✓ Contact all NGOs and government departments to obtain any list of people from that island who have been identified or have received assistance for a problem

✓ During the visit follow the schedule below:
  • Arrival at School
• Meet with community leaders to set the schedule
• Place baggage in guest home / hotel
• Meet with the education/ health people
• Review schedule and revise schedule as needed
• See and further develop list of people with problems from the health clinic or hospital
• Meet the school principal to discuss the school screening. Look at the screening facility
• Meet with community leaders
• Hold brief 3 hour training workshop on identifying children and adults with difficulties
  Participants include selected teachers, school leavers, health personnel including community health nurses, social workers and volunteers. Could be in first evening before screening day or during that (early) morning.
• Conduct screening of participants in schools including preschools
• Conduct home visits and screening in the home wherever possible
• Collect information on quality of life for people with difficulties
• Conduct community screening camp at school
• Conduct additional home visits
• Make initial report before leaving the school
• Departure
• Send to officials a thank you note and the final report including the database

The Screening Report Form

The Screening Report Form found in Appendix Three. The Screening Report Form is used to record the results of individual performance for the screening. It is used in the schools, community screening camps and during home visits. The Form has been carefully designed to report most things that can be observed during the screening process.

The school children and adults carry the Form with completed name and date of birth, school grade, etc. with them as they proceed to each screening station. The technician at each screening station records the results for that screening test on the Form. When all the screening tests are completed, the individual hands over the Form to the recorders who analyze the results and provide an advice slip to the individual. The advice slips indicate that either the person appeared to have no obvious difficulty or is suspected to have some degree of functional limitation. The Forms are kept by the screening

![Screening Report Form Image]
team for further analysis. The overall results are reported to the island officials, health officers and the head of the school. The Form should have the name of the island and school inserted on the top of the Form with the proposed date for the screening.

Who Receives the Screening?

Ideally, everyone in the community would receive the screening to identify all persons who may require assistance. At the very least all primary, secondary and preschool children attending schools and those not attending schools should be screened. In successive years only the entering grade one and lower preschool children would need to be screened. For out of school children, a separate screening should be conducted after the school children are screened. In addition, all individuals thought to have a functional limitation should be screened to confirm the degree of limitation and for referral purposes.

The Screening Test Instructions (Screening Test Protocol)

The Screening test is a precision instrument that when implemented carefully can produce valid results. To ensure validity, the precise instructions should be followed. These instructions for each test are provided below including:

- What does the test measure and tell us about the person?
- What materials do we need for the test?
- How do we conduct the test?
- How do we score the test?

GENERAL GUIDELINES:

General Instructions for the Screening Volunteers

At least one hour should be reserved to provide orientation and training to the screening volunteers. The technicians can be teachers, health workers, social workers and volunteers who are usually at least ‘O’ level graduates and preferably ‘A’ level graduates. The best volunteers seem to be young adults who have just completed their A level exams and are waiting for results or who have not yet found a job. A small fee of around US$5 seems sufficient “Thank You” to the volunteer technicians.

The content of the screening orientation and training includes:

- The purpose of the Screening
- A brief introduction to functional limitations
  - Problems in Seeing and the Eye
  - Problems in Hearing and the Ear
  - Problems in Mobility
  - Problems in Communication
  - Problems in Thinking and Remembering
  - Individuals who have Multiple problems
- An overview of the screening stations
✓ A detailed guide through the Form including marking the results for each test
✓ Detailed instructions for each screening area
✓ More in-depth instructions and practice in the individual screening areas that the technicians will be conducting
✓ Issues of sensitivity to those undergoing the screening

The lesson plan for training the Screening Team

Functional Screening for Disabilities Survey Research

Training Syllabus for Screening Team members

Learning Objectives:

By the end of the session screening volunteers will be able to

- Name the categories of Disabilities (FL)
- State the purpose of the screening survey
- Identify individuals who seem to have a FL and refer them to the screening supervisor
- State approximate gathered percentage of Disabilities
- State the reasons why that number may be lower than expected (attitudes, false negatives)
- List the 9 tests conducted in the functional screening camp
- Perform with verified accuracy any screening test they have selected or assigned

Learning Syllabus

The following instruction is provided to the screening volunteers during the 1.5 hours session

1. Introductions of volunteers and Screening Staff
2. Introduction to the terms within Disabilities and its prevalence
3. Prevailing Cultural attitudes
4. Introduction to the screening objectives
5. Introduction to the screening report form
6. Review of each test with stress on referral to screening coordinator and ‘Refer box’
7. Importance of carefully looking at the person for signs of problems especially with eyes
8. Setting up of the screening stations and the process for screening
9. Trying out the tests at each station as a screener and a screening participant
10. Selection of testing area of choice or assigned
11. Rehearsal of testing protocol for each test area
12. Questions and answers and Discussion
13. Logistics (meals, certificate, breaks, etc.)
14. Review
15. Closing

Following the orientation, screening volunteers are assigned or volunteer for any of the seven screening stations and supervisor roles. The screening ‘technicians’ are shown specifically how to conduct the test and then are rehearsed with at least five trials to ensure the person fully understands the test’s instructions and scoring. This assumes that the screening room has already been set up. See next section. The technicians will be able to better understand the tests following the rehearsal with the participants or community members.
Preparations in Setting-Up the Screening Area

The first thing to do when arriving at a school or community centre is to distribute the screening forms to technicians and / or supervisors with instructions on how they conduct the various stations in the Screening room.

Room for Screening: Once the testing area has been identified the stations can be set up. Criteria for room selection for screening include the following:

- Walls at least 6 Meters in length in one area that has a blank wall opposite (far vision test)
- At least 6M X 4M with desk and good lighting
- The outside compound can be used so long as there is adequate shade for the duration of the school day.
- Place for at least seven stations with two desk at each station
- Relatively quiet for the hearing test

The Rehearsal with those who will be taking the screening test

It is extremely important to rehearse some of the tests with the children and adults prior to the screening. Each group, preferably two classes or 40 participants at a time, is asked to stand in a semi circle while the more difficult tests are described and the responses rehearsed. This operant condition is especially important for younger children. The rehearsal is described below:

The group is informed in KHM ER and other ethnic language for classes 4 upwards and local language for those younger or those from ethnic minorities where English is not so common, about the purpose of the screening. “Today we are conducting a health screening. We will be scanning your senses to see if everything is working okay”. “How many of you have problems with your eyes or has any problem seeing the blackboard? Place a question mark next to the ‘Suspected Eye Problem’ box for those who raise their hands. Then say: “How many of you are using eyeglasses even if you left them home?” Tick the box ‘Wears eyeglasses’ on Form number 5 for those who raise their hands.

Then ask “Who has any problem with their ears? Itching, pain in the ears or stuff comes out of the ears?” Put a question mark next to the box ‘Suspected Ear Problem’. Then ask, “Who wears a hearing aid?” Circle the YES in box ‘Uses Hearing Aid’ under number 6 for those who raise their hand.

Then ask the participants: “Point your thumb on right hand up like this” (instructor puts thumb up and moves around the semicircle encouraging participants to point their thumb up. Then say: “Okay now put your thumb down.” Demonstrate. “Now to the right side” Demonstrate. “And now
point to the left”: **Demonstrate.** Say, “Good. We will point our thumbs in the same direction as the E on that vision chart over there”. Point to the far vision chart. Then with the E chart held in the leader’s hand and the top E pointing up is pointed to, say “okay point your thumb up like this”. Then point to the next E on top line pointing down and say “And which direction is this? Yes, thumbs down, good. And this (As the right facing E is pointed to). "Yes, it is pointing right, and this one” Point to left facing E third line down. “Yes, that is left facing”. Point to the lowest line on the near vision test card and laugh with the participants and say, “YES, that one is too small to see far away”. This card is for the near vision test over there”. Point to the table that has the near vision test and have examiner wave to the participants. Then say, “Remember to cover first your LEFT eye then your RIGHT eye like this”. The Instructor demonstrates covering the eyes. **NOTE:** the instructions should be fun and lively, but not too boisterous.

Next hold up the two V fingers on your right hand and ask “What is this?” Say “Yes, it is two” in response to theirs. “Now this?” Put up four fingers. “Yes, that is four”. “Now go like this”. Put up 4 fingers then 2 fingers and have them repeat. Say, “Good let’s try this”. Put up two fingers then four and hen two fingers and turn so all can see and have them repeat. Say “that’s correct”. Next say, Now repeat this number six, two, four, five, one” Wait for the response and say “Good” **NOTE:** for younger children under 7 use fingers 1 and 5 and say only three numbers.

Next say, “How well can you hear? You will be asked to point to the animal on this card that makes the animal sound” Hold up the animal picture card and using the tape player, push the play button to play the animal sounds. Point to the cow and say “Yes, this is the cow… kind of a sick cow”. Then say as the rooster sound is played, “And this? Yes, it is a rooster” and point to the rooster. “And this? Yes, it is the bird” as you point to the bird while the bird sound is played.

Then say as you hold up the clipboard with simple q p d b written on it “You will be asked to draw a simple q p d b and to say Khmer words ’Bei’, ‘Sei’ and ‘Trey’. You will also be asked to walk the line like this”. Instructor then demonstrates how to walk the line with toe touching heal of shoe in front of it.

Then ask, “Any Questions?” Answer any question then say “Good, lets split into groups and enjoy the screening” The technicians then divide the group into four smaller groups and send them to stations for near vision, far vision, hearing and discrimination test table.

**Individual Tests**

**A. Vision Tests**

**1. The DISTANCE “E” Chart Test (Snellen Eye Chart)**

- The E chart is an internationally standardized chart to measure visual acuity.
- The numbers on the right side of the chart indicate the distance of visual acuity.
- The number 6 on top means at 6 meters
- The number under the 6 means how many meters away the average person can read that size E. For example, the 6/12
means that the average person can see that size E from only 12 meters away rather than 6 meters which is normal.

- If someone scores 6/18 means that they cannot see as well as the average person.
- Anyone who cannot see at 6/18 in one or both eyes will be referred to a specialist
- This screening test is searching for more acute problems and so requires the person to see only at 12 / 6 rather than 6 / 6.

What does the “E” test tell us about a participant?

- The “E” chart is a screening test for distance vision (a test for near-sighted)
- The test tells us whether the participant can see letters close up (natural reading distance)
- The test will also allow the technician to look at both eyes to identify any eye problem such as red eye (conjunctivitis), white coverings over the cornea (cataract) or lazy or defective eye.

What materials do we need for the “E” Chart Test?

- A Snellen E chart card (non reflective)
- A piece of string 6 Meters long
- A piece of sticky tape or a piece of chalk to mark 6 meters line
- A pointing device for the examiner
- An occluder (something to cover the eye not being examined)
- The report form
- A clipboard
- A pen for recording the result

How do we conduct the “E” test?

**Hanging the “E” Eye chart:** The examiner finds a suitable place for each of the TWO “E” charts. The best place is usually on a well lit wall of the classroom or on the outside building or a pillar in the walkway where there is not much sun. The chart is hung in a place where there is a clear and unobstructed view from where the participant will stand. There should be no distractions in back of the E chart such as a road or sun. The average classroom wall is a good place for the E test because most rooms are exactly 6 meters long. The chart is best hung in a place where no participants will pass in front of the E chart. The E chart is taped to the Wall with masking tape at a height from the ground so that the 12/12 line with the arrow is even with the examiners elbow. This allows the examiner to comfortably point to the line without raising the arm and it is at the eye level of most of the 9 year old participants.

Marking the 6 meter distance is easiest if someone holds one end of the 6 meter string (provided in the screening kit) at the bottom of the wall where the E chart is to be hung while another technician walks the other end of the string to the end. Mark that end spot. Put one end of the string on that mark. Again walk the other end of the string to the end, pull the string tight and
mark the 6 meter line. Use the roll of masking tape and scissors or chalk to and mark the 6 meters point where the participants will stand. If the ground is used, then draw a deep line in the earth. Mark the place at 6 M where the participant should stand. A 40 cm piece of masking tape or chalk line works best. Any marker can be used so long as the marker cannot be easily moved. This is the line on which the participants will stand to take the E test. Be sure to roll up the string and put it away.

The participant stands on a line EXACTLY 6 meters away. **Further rehearsal instructions to participants should be as follows:** In each demonstration, the participants are shown how to point their thumbs in four directions: up, down, right and left. **It may be necessary in the testing area to repeat instructions to some people.** If necessary the examiner explains again the testing procedure. During the screening he points to the top E and says “*Point your thumb in the same direction as the “E”, “I will point to on the Es on the chart like this.*” The technician demonstrates and has the participants repeat the four directions of the E and corresponding thumb placement. “*Point your thumb in the direction of the E on the chart.*” The technician points to the “E” pointing up (the last E on row 6/18) and waits for the participants to follow: “*Good, now this one:*” the examiner points to the one pointing left (second “E” on line 6/18). The examiner corrects anyone until all thumbs are pointing left. The examiner says “Good”. The examiner takes down the chart and puts it again on the wall where the participants will be tested.

**The “E” Chart Eye Test and Screening for Eye Problems:**

1. The participants stand in a line near the 6 meter mark opposite the E Chart.

2. The technician stays near the group to keep them orderly and to mark on the screening form. Have the first person to be tested stand on the 6 meter tape or chalk mark.

3. **If the participant is wearing glasses the technician should make note of this on the Screening Form under 4. The participant should wear glasses during the screening test.**

4. The participant is asked to cover the **LEFT** eye with the occluder first. Then the examiner uses the pointer (thin paint brush stick) to point to any of the Es on line 12. If the person does not respond with thumb movement, they are prompted to move their thumb in the direction of the E pointed to.

5. If the participant moves their thumb in the correct direction for the first E, the examiner moves the pointer to another E pointing in a different direction from the first.

6. If the participant responds correctly, the person scoring the report Form should make a tick in the **PASS** box for the Right eye (Item 4) on the report Form.

7. The examiner then asks the person to cover their **RIGHT** eye and then points to a different E on the same line 12.

8. If the person points his thumb in the correct (same) direction as the position of the E on the line 12 of the chart, the examiners moves to the second E on line 12 that is in a different direction. For example, if the examiner pointed to a right facing E on line 12 then point to a down facing E on line 12.
9. If the participant responds correctly, the person scoring the report Form should make a tick in the PASS box for the Left eye (Item 5) on the report Form.

10. The person is then motioned to pass the occluder to the next person in line.

11. The participant then hands the occluder to the next person in line.

12. The participant who just took the vision test should pick up his report paper from the technician and walk to the next testing station.

13. If the participant cannot point in the correct direction for two Es in either or both eyes on line 12 try pointing to a third E

14. Repeat the sequence on line 12, but this time use different E positions. For example, point to the upside down E or left facing E on the chart.

15. If the person misses two out of three letters in either eye, go to the next higher line 18 and repeat pointing to 2 Es. If the person responds correctly for the two Es tick the REFER box for the Right Eye on item 5B in the report form and check the REFER box at the top of the form. Then write 18 next to the 6 in the space provided on the form.

16. If the participant does not respond correctly to the Es on line 18 move up to 24 and repeat the sequence and record 24 next to the 6 on the form.

17. If the participant does not respond correctly to the Es on line 24 move up to 36 on the top of the chart and repeat the sequence and record 36 next to the 6 on the form.

18. If the participant does not respond correctly to the Es on line 36 record NA (Not Able) next to the 6 on the Form. BE SURE TO TICK THE REFER BOX AT THE TOP OF THE FORM.

19. If the participant seems confused and moves their thumb in an erratic pattern on any line it may indicate that the participant may not be able to follow directions the examiner can point to the biggest E on line 36 and the technician or helper standing near the participant can help the participant with the orientation direction. If this fails to work bring the person up close to the E chart and practice the orientation. This is sometimes necessary with very young children under 5 years of age and those with learning difficulties.

Checking for Eye Problems:

1. Before asking the person to place their hand over their left eye the technician looks carefully at the eye for any signs of problems such as red eye, watery eye, blinking or cross eye (strabismus and astigmatism).

2. If the technician observes anything abnormal about either eye, tick the “Suspected eye problem” box (Item 4) on the chart.

How do we Score the “E” Chart Eye test?

1. When the participant reaches the examiner, the examiner puts the record form on the clipboard. If the participant has passed the screening test, the examiner ticks the PASS box “right” and then “left eye” (on item 5B).
2. If the participant is unable to correctly match the correct direction with their thumb on line 12, the examiner puts a tick in the REFER box corresponding to the Right or Left eye and ticks the REFER box on the top of the paper and gives the paper back to the participant. The line number that the person could see is marked next to the 6/____.

3. If the person is wearing glasses write the word “Wears Glasses” next to the “Suspected Eye Problem” box on item 5B.

4. If the person seems to see (can see the first line), but confuses the direction each time the person might have a directional or orientation disability. Mark REFER and note “Direction problem”.

The NEAR Vision Test (E chart at reading level)

What does the Close-up Vision Test tell us about a participant?

✓ The close-up vision test tells us whether the participant can see accurately close up or at a reading distance (last row 0) approximately 20 cm or reading distance from the eyes. If a participant cannot see at this distance he or she will have difficulty reading and writing.

✓ The test can also tell us if there might be a possible perceptual disability or dyslexia where the direction of the E might be confused.

✓ The test can also tell us if the person needs reading-glasses.

✓ The test can tell if a participant cannot recognize the direction of the E that may mean there is a learning problem.

What materials do we need to conduct this test (checklist)?

✓ Report form
✓ Close Up E Snellen Chart
✓ Khmer reading chart as a back-up
✓ Occluder
✓ Clipboard
✓ Pen

How do we conduct the close-up (E chart vision test)?

1. The examiner places the report form on a clipboard or desk in front of the participant.

2. The examiner says “Cover your left eye with the smiley face and point your thumb in the direction of the E that I point to”

3. The examiner points with a pointer to one of the Es in row 0 the bottom row only. Do not point to all Es. This is a waste of time. Only 2 Es per target line is sufficient.
4. If the participant responds correctly, the examiner then points with a pointer to an E pointing in a different direction.

5. If the participant points in the correct direction, check **PASS** on the report form for the Right eye (5A). If the participant did not point in the correct direction tick the **REFER** box on the Right eye (5A) and put a check in top **REFER** box.

6. Point to an E on the next line 1 if the person responds correctly point to an E pointing in another direction. If the person responds correctly, write ‘1’ next to the ‘N =’

7. If the person does not respond correctly move up the chart to line 2, 3 or whichever line the person can see at. Point to two Es on that line that can be seen. Write the number of the line the person can see next to the ‘N = ___’.

8. When the RIGHT eye has been completed, say to the participant “Cover your the right eye with the smiley and point in the same direction as the E that I point to.”

9. Point to an E that points in a different direction. Again do not point to all Es. This is a waste of time.

10. If the participant correctly points in the correct direction put a tick in the **PASS** box for the Left box (5A). If the person did not point in the correct direction, check the **REFER** box for the left eye and check the **REFER** box on the top of the report form and put the number of the line correctly seen next to the “N = ___”.

11. Give the report form back to the participant

12. Motion for the next participant to cover their left eye and repeat these directions,

13. If the participant seems to have difficulty following the directions, move to the largest E on the top line and practice until the person can respond correctly.

**B. Screening for Cognitive Capacity (Maturity)**

The Screening Test for Motor Memory Recall (MMR) (Cognitive Capacity and Information Processing) and Auditory Memory Recall (AMR)

The Motor Memory Sequencing Test (MMR) is a measure of short-term motor and visual memory. It tests the child’s ability to recall simple information stored in short-term memory. This non-verbal test is considered to be culture fair which means it can be used somewhat reliably in different cultures. There are TWO parts to this test, the finger recall and the verbal recall test.

**What does the Motor Memory Recall tell about a participant?**

- Whether the person has adequate short-term memory
✓ Whether the person has mature hand coordination (linked to writing maturity)
✓ Whether the person has some visual, motor memory processing problem
✓ Whether the person has clear vision
✓ Whether the person has adequate hearing and speech articulation

What materials do we need to conduct the MMR Test?

✓ The report form only
✓ A pencil or pen.
✓ The hand of the examiner.

How do we conduct the MMR Finger Digit Test?

✓ This test can be given anywhere during the screening process. It is most efficient to conduct this test while children are in line for the eye or ear test.

1. The examiner / technician takes the report form from the person and starts the test. Giving instructions to the person is usually unnecessary since the instructions were already given in the group.

2. The technician motions to the person to put their hands to their side. This is a silent test. The technician raises their own hand and makes on the numbers 2 or 4 in a four pattern sequence example 2-2-4-4 or 2-4-4-2 or 4-4-2-4, etc. Each number should be approximately one second. The four number sequence should take 4 seconds. The participant is then asked to repeat the sequence. “Repeat what I do” or “Go like this” instructions are sufficient.

3. If the person repeats this correctly with his hands tick PASS on the report form (Item 1B). If the person does not repeat correctly try it again using a different sequence from the first. If the person still does not repeat correctly do not tick REFER on the report form (Item 1B). Instead circle the number that was successfully repeated, if any and tick the REFER at the top of the form. Circle the sequence that was used. Ticking the REFER box on this item is embarrassing for the participant.

4. If many of the children do not pass using 2 and 4 and especially if the children are in class one or two in a very rural location substitute the numbers 1 and 5, example 1-1-5-5 or 5-1-5-1, etc. This seems to be easier for younger children to repeat.

For the oral recall of numbers the same instructions as above are followed except the examiner says at a normal conversation rate 3 to 7 numbers that are found on the Form. The participant is expected to repeat the number. At least two tries are allowed and then the examiner selects a shorter string of numbers. The sequence of numbers used from the Form that is successfully repeated is circled. If it is less than five numbers recalled for anyone above 8 years then the top REFER is ticked and the digit sequenced attained is circled on the Form.

How do we score the MMR test?

✓ The technician looks for correct repetition of the numbers made on the hands of the participant
The technician ticks **PASS** or **REFER** on Item 1B and at ticks REFER at the top of the form if the person cannot repeat the sequence after two tries.

- If the person cannot repeat the number sequence, there may be a problem in memory maturity (check the DTHP test on back of form to see if the drawing is consistent with the drawings of peers). Look for the details in the drawings. (Refer to DTHP above). If the drawings seem mature then there may be a problem in vision. If the vision sections are normal then there may be a problem in short-term memory. If the person passes the visual discrimination test then there may be a problem with motor - visual information processing. In that case a specialist should assess the child.

- The Motor Memory Recall test is far more difficult than the Verbal Recall test. Any child over 5 years of age should be able to repeat 3 numbers given verbally. If not there is most likely a short-term memory, processing or hearing problem.

### C. Screening for Specific Learning Problems / Processing Problems

1. Auditory Discrimination Test matching drawing to spoken word
2. Visual Discrimination Test – matching spoken word to drawing
3. Letter visual Discrimination Test

**Auditory Discrimination Test - matching drawing to spoken word**

The Auditory Discrimination Test (ADT) asks the person to point to two objects that sound alike

**What does the ADT tell us about a student**

- Whether the person has auditory discrimination for words that sound alike
- Whether the person has basic vocabulary understanding with common Khmer words (Bei, Sei, Trey)
- Whether the person can understand and match the spoken word to the object
- Whether the person can follow verbal instructions
- Whether the person has good hearing
- Whether the person has adequate ability to follow directions

**What materials do we need to conduct the ADT Test?**

- The report form
- A pencil or pen
- The laminated picture card with the picture of the letter 3, a woman and a goldfish
How do we conduct the Auditory Discrimination (ADT) Test?

1. The participant walks to the desk (station) with the screening materials and hands the form to the technician.

2. The technician asks the person to point to two of the objects in pictures that are spoken. The technician says “Point to ‘Bei’ or ‘Point to ‘Shey’ then waits for the person to point to the object named. If they respond correctly say “Point to ‘Trey’. Only two of the three need to be asked.

3. If the person responds correctly again, the technician ticks the PASS box in Item 2B.

4. If the person points to the wrong picture or is confused, the technician asks the person to point to the alternative object not used.

5. If the person cannot point to the correct object, the technician ticks the REFER box on Item 2B and then ticks the REFER box at the top of the form.

6. Hand the form back to the person and ask the next person in line to point to the pictures that were not asked of the previous child. Chances are the person next in line is watching (rehearsing the answer).

How do we score the ADT test?

1. The technician ticks the PASS box in Item 2B if the person points to the correct two pictures.

2. The technician ticks the REFER box on Item 2B if the person still does not point to the correct pictures after two tries per object. The technician then ticks the REFER box at the top of the form.

3. If the person cannot adequately match the picture to the spoken word after repeated tries, it suggests that the person has limited cognitive capacity. Look at the MMR to confirm that the person has passed these items. If they did not pass one or both of these items then the matching errors could be a function of cognitive immaturity or delayed development. If the person passed those items and the hearing test and vision items, then there might be a problem with the ability to process the spoken word to match it to the picture or to discriminate between the similar sounding words. In this case, the child should be referred to a specialist.

Visual Discrimination Test – Matches object with Word

Gas (tree) / Ass (horse) / Mas (fish)

What does the VDT tell us about a participant?

✓ Whether the person has visual discrimination for words that sound alike.

✓ Whether the person can understand and match the object to spoken word
✓ Whether the person can follow verbal instructions

✓ Whether the person has basic vocabulary understanding with common Khmer Letters (Cha / Caa / Chor / Chhor)

✓ Whether the person has good vision

✓ Whether the person has good speech / articulation especially in the higher frequencies

**What materials do we need to conduct the VDT Test?**

✓ The report form

✓ A pencil or pen

✓ The laminated picture card with the letters Cha, Caa, Chor and Chhor

✓ The pointing stick (small paintbrush handle)

**How do we conduct the Auditory Discrimination (VDT) Test?**

1. The participant walks to the desk (station) with the screening materials and hands the form to the technician.

2. The technician asks the person in Khmer to say the word of the object pointed to in pictures. “What is this?”

3. If the participant names the object correctly, the technician says “What is this?” as he points to a different picture.

4. If the person responds correctly again, the technician ticks the **PASS** box in Item 2A.

5. If the person cannot correctly name the object or is confused, the technician asks the person to name the alternative object not used.

6. If the person cannot correctly name the object, the technician ticks the **REFER** box on Item 2A and then ticks the **REFER** box at the top of the form. Hand the form back to the person and ask the next person in line to point to the pictures that were not asked of the previous child. Chances are the person next in line is watching (rehearsing the answer).

**How do we score the VDT test?**

✓ The technician ticks the **PASS** box in Item 2A if the person correctly names the two objects.

✓ The technician ticks the **REFER** box on Item 2A if the person cannot correctly name the objects in the pictures after two tries per object. The technician then ticks the **REFER** box at the top of the form.

✓ If the person cannot clearly name the object in the picture after repeated tries, it suggests that the person has limited cognitive capacity. Again, look at the MMR and the DTHP test results to confirm that the person has passed these items. If they did not pass one or both of these items then the matching errors could be a function of cognitive immaturity or delayed development. If the person passed those items and the hearing test and vision items, then there might be a problem with the ability to process the spoken word to match it to the picture or to discriminate between the similar sounding words. In this case, the child
should be referred to a specialist.

- If the person seems to know the object name but mispronounces it or stammers, indicate a speech problem in the Speech Problem box at line 3 of the Screening Report Form and tick **REFER** at the top of the Form.

**Letter Visual Discrimination Test (LVDT)**

This is a matching exercise where the person is asked to match (visually discriminate) the p b d q cut out letters with the p b q d letters that are pointed to on the table. The Letter Visual Discrimination Test is a test of both visual discrimination using foreign letters and also forms part of the vision screening.

**What does the LVDT tell us about a participant?**

- Whether the person can adequate discriminate letters that look similar p b q d.
- Whether the person has ability to match similar objects
- Whether the person has good near vision
- Whether the person can follow directions.

**What materials do we need to conduct the LVDT?**

- The report form
- A pencil or pen.
- The letter card
- Four individual letter cards to match the letters on the card.

**How do we conduct the LVDT in School?**

1. The person walks to the desk (station) with the screening materials and hands the form to the teacher.

2. The technician asks the person to find the same letter that the technician points to from the 4 letters cut out in squares that are laid out on the desk and then to put that letter on top of the same letter on the letter board.

3. If the person picks the correct letter the technician points to a second letter on the letter board and ask the person to find the same letter and place it on top of the letter on the letter board.

4. If the person correctly matches the two letters the technician ticks the **PASS** box in Item 3C.

5. If the person does not correctly match the letter, the technician asks the person to try again. If the person fails the second time the technician ticks the **REFER** box on Item 3C and the technician then ticks the **REFER** box at the top of the form.

6. Hand the form back to the person and ask the next person in line to match a different pair of letters that were not asked of the previous child. Chances are the person next in line is watching (rehearsing the answer).
How do we score the LVDT?

✓ The person is asked to match the Khmer letter card to the same letter that is pointed to. The technician looks for correct matching of 2 out of the 4 letters.

✓ The technician ticks PASS or REFER on Item 3C and at ticks REFER at the top of the form if the person cannot repeat the sequence after two tries.

✓ If the person cannot repeat the sequence, there may be a problem in memory maturity (check the MMR test to see if the child has delays in that area as well).

✓ The Khmer letters matching also part of the vision screening Motor Memory Sequencing Test (MMR) is a measure of short-term motor and visual memory. It tests the child’s ability to recall simple information stored in short-term memory. This non-verbal test is considered to be culture fair which means it can be used somewhat reliably in different cultures.

Directionality - Related to Dyslexia

Optional for students + 7 years: This is a simple test of orientation and directionality that relates closely with reading and writing skills. The student writes the English letters p q b d in any order on the back of the Screening Report Form

What does the Directionality test tell us about a participant?

✓ Whether the participant can reproduce characters with correct orientation.
✓ Whether the participant can recall and reproduce the characters
✓ Whether the participant can discriminate between simple (small letters) and large letters

What materials do we need to conduct the Directionality test?

✓ Report Form
✓ Clipboard
✓ Pencils

How do we conduct the Directionality test?

1. Take the Report Form from the person and say “Draw a simple p q d b on the back of this form”.

2. Watch for mistakes in direction and orientation of the letters.

3. If the person hesitates or makes a mistake encourage them to try it again until they reproduce it correctly.

4. When they correctly reproduce the 4 letters tick the PASS box item line 4 and take the Form of the person next in line.
5. If they cannot reproduce the letters correctly after several attempts, tick the REFER box for item 3E and tick the REFER box on the top of the Form.

6. The examiner hands the paper back to the participant and collects the Form from the next participant.

How do we score the Directionality test?

✓ The examiner ticks the PASS box at item 3D and 3E if they correctly reproduce p q d b and ‘Kaaf’ and ‘Alif’.
✓ The examiner ticks the REFER box at item 3D and 3E if p q d b cannot be correctly reproduced and then ticks the REFER box at the top of the Form.

D. Coordination and Physical Impairments Test

Walk a Straight Line Assessment

This is a simple test that asks a participant to walk in a straight line to determine if they have any physical problem.

What does the “Line Walk” test tell us about a participant?

✓ A few participants will have slight or moderate physical disability such as a limp caused by cerebral palsy, polio or from an accident.
✓ It will also show if a participant has a balance or coordination problem caused by a middle or inner ear problem.
✓ This also provides an opportunity for teachers to look for other physical problems such as a deformed hand or missing arm, etc.

What materials do we need to conduct the “Line Walk” test?

✓ Chalk or masking tape
✓ String 1 meter long (same as above 6 meter string with 1 meter knot)
✓ Report form
✓ Clipboard
✓ Pen

How do we conduct the Line Walk test?

1. In the classroom the examiner will say “After the “E” chart test you will walk to the next technician / examiner following the path of the thin line so we can see if you have any physical problems. Place one foot closely in front of the other like this.” The examiner has one of the participants demonstrate how to put one front in front of the other so the heel touches the toe of the other shoe that is behind it.
2. Following the participant’s eye test described above, the examiner says to the participant “Please walk the line on the floor putting one foot closely in front of the other” or gestures the participant to walk along the line.

3. The participant carefully walks towards the examiner

4. The examiner puts a tick in the **PASS** box if the participant has no problem walking

5. The examiner puts a tick in the **REFER** box if the participant has a problem and notes the problem that is observed such as a limp or deformed arm.

6. The examiner hands the paper back to the participant

**How do we score the Line Walk test?**

- The examiner watches how the participant walks closely
- Look for loss of balance
- Look for a limp caused by one leg being shorter than the other
- Look for a deformed or crippled leg
- Look for arms or hands that are slightly bent or crippled
- If you find any of these put and X in the box and tick the refer box

**E. Screening for Hearing Loss**

1. **Pen Click Hearing Test**

**What is the Pen Click Hearing Test?**

The Pen Click Hearing Test is a simple screening test for possible hearing loss. The pen click or strike sound should be around 1500 Hz or cycles per second and not very loud. A person with normal hearing should hear the click of the pen from around 60 cm or 2 feet in a reasonably quiet area.

**How Do We Conduct the Pen Click Hearing Test?** FIRST, check the ear of the child for any pus or any other unusual condition. If you notice something strange, write it on the report form.

After the child is given the directions for the test: “Raise your hand when you hear the click of the pen”. The examiner stands slightly behind the right side of the child so the child cannot see the pen at a distance of around one arm length or 60 cm or 24 inches or 2 feet. The examiner at a distance of 60 cm pushes down on the retractor button of the pen and waits for the child to raise his hand. When the child responds correctly the examiner asks the student to turn around so the left ear is facing the pen held by the examiner. The examiner rep...
and waits for the response. If the child does not respond correctly, try again. If the second attempt fails, move slightly closer and try again until the child responds.

How Do We Score the Pen Click Hearing Test?

If the child does not respond on either or both sides, tick the “Refer” box for the ear (s) that did not respond correctly. Write on the form if you had to move closer to the child for a response.

Animal Sound Discrimination Test (ASDT)

What does the ASDT tell us about a participant?

✓ Under quiet conditions, the ASDT can identify participants who might have any type of hearing loss including slow hearing.

✓ It is also a way for the technician to look at the ear to determine if there is any problem with the ear.

What materials do we need to conduct the Animal Sound Discrimination Test?

✓ The Auditory Screening Device (ASD). The ASD is an electronic device that at the push of one of three buttons makes the sound of birds high pitch (4,000 Hz), a rooster middle pitch (1500 Hz) and a cow low pitch (500 Hz).

✓ Pictures of animals

✓ A report form

✓ A pen for scoring

How do we conduct the ASDT in the school?

First demonstrate this test and rehearse this test in the classroom the examiner holds up the picture of the birds and asks what sound does this make?” The children make a high pitch sound of birds chirping. The picture of the rooster (cock) is held up. The participants make the sound of a rooster. Likewise the picture of the cow is held up and the children make that sound. The technician then picks up the ASD and says, “The technician will hold this to your ear and you will hear either birds, a rooster or a cow. You should point to the picture of the animal that makes that sound.” If possible make a recording of the animal sounds on a cassette tape and play these sounds to the participants to train their ear for these sounds. Show the picture immediately after playing the sound.
In the School testing area:

1. Set up two desks in a relatively quiet room in the school. The ideal dB level should be less than 50 dB. Use a sound level meter to check this. FREQUENTLY REDUCE THE CLASSROOM NOISE IF NECESSARY!

2. The examiner first checks the ears and looks for any deformity or white glue coming out of the ear. It will usually smell foul. If there is a problem, the examiner checks the refer box right or left ear in the ear problem box and checks the Refer box on the top of the form.

3. The technician says to the participant, “Point to the animal that makes this sound.” The technician pushes the birds (H) button and puts the ASD just next to but not on the right ear to be tested. The person is expected to point to the bird. The technician functionally checks to see if the sound is still heard and puts it to the left ear. The person then points to the bird.

4. The technician next pushes the M button and the rooster sound is made. The ASD is put close to the Right ear. The person should point to the picture of the rooster. Functionally move the device to the Left ear. The person should again point to the rooster.

5. The technician next pushes the L button and places the ASD near the Right ear. The person should point to the Cow.

6. If the person correctly responds with all three items, the examiner checks the pass boxes for the Right and Left ear.

How do we Score the ASDT test?

If the participant has points to the correct animal for each tested ear, the examiner checks the right and left ear boxes. If the participant has not passed in any or both ears put an X in the refer boxes and ticks the Refer box at the top of the report form.

If a participant fails the auditory screening test, they should receive a pure tone audiometric assessment. The Form provides a place to record the results of this screening.
Save the Children Cambodia  
**Screening Report Form**  

**Date**: / /  
**Location**: School / Class……….  
**Child’s Name**: Date of Birth: / /  
**Age**______ yrs.  
**Sex** M / F  
**Location**:  
**Date**: / /  
**Refer** □  
**Level of Functioning**: 1 2 3 4  
**Sex**: M / F  
**Child has any problems?** Yes / No  
**What Problem?** (Please List) ________  
**Place a √ in a box in each screening area.**  
If a Person misses one or more areas place a √ in the TOP Refer box.

**1) Cognitive Maturity** Number Recall  
A. Motor visual memory recall: Person recalls and repeats on fingers digits Circle one: (for over 7 yrs)  
   4-2-4-4 or 4-4-2-4 or 4-2-4 or 2-4 / 4-2 (for under 7 yrs) 5-1-5-5 or 5-5-1-5 or 5-1-1 / 5-5-5  
   Pass □ Refer □ 

B. Digit span (one digit per second) (6-18 years): 5-6-1-8-8-2 or 5-1-8-6-4 or 4-8-1-6  
   (3 to 5 years) 8-5-1 or 6-4-5 or 8-1-6 / (Circle the one span selected)  
   Pass □ Refer □

**2) Learning Disabilities Screening for auditory/visual processing:**  
A. Receptive - Person points to two objects spoken by the teacher Bei (3) or Srey (Woman) / Trey (fish)  
   Pass □ Refer □  

B. Expressive - Person speaks clearly when naming above objects  
   Screening for letter reversal: (related to dyslexia) Person correctly matches two out of the five Cha / Caa / Chor / Chh or  
   Pass □ Refer □

**Speech difficulty?** Describe □

**3) Visual Discrimination:** Person matches letters p q b d  
   Pass □ Refer □

**4) Coordination / Balance** Person walks to next station along a taped line on the floor  
   Pass □ Refer □  
   **Physical Problem** ___________________________  
   **Mobility aid used?** YES / What kind? (crutch, etc.) ___________________________  
   **What is needed** ___________________________  
   **Physical Difficulty** □

**Suspected Eye Problem** □

**5) Vision** (Visual acuity) First check person’s eye for any problem  
A) Near Distance Vision screening: Person points in the same direction as 2 out of the 5 middle  
   (N20) row of Es on the Near Vision Chart held at reading distance by the student. (NEAR)  
   □ Right Eye Pass □ Refer □  
   □ Left Eye Pass □ Refer □  
   **N =**______  
   **Wears any eyeglasses / contact lenses?** Yes / Rx not OK?  
   □ Right Eye Pass □ Refer □  
   □ Left Eye Pass □ Refer □  
   **N =**______

B) Far Distance vision screening: Person points in the same direction to 2 Es on 6/9 line (FAR)  
   level at a distance of six meters Mark line that was clearly seen.  
   6/ __________ Right Eye Pass □ Refer □  
   6/ __________ Left Eye Pass □ Refer □

**6) Hearing** (Auditory Acuity) first check person’s ears for any physical problem:  
   **Uses hearing aid?** Yes □  
   **Uses sign language?** Yes □  
   **Suspected Ear Problem** □

**Option 1: Pen Click Test** (pen is held 45 cm (16”) behind each ear  
   Subject raises hand when click is heard  
   Right Ear Pass □ Refer □  
   Left Ear Pass □ Refer □

**Option 2: Animal Sound Test.** Auditory screener is held 4cm from the right ear The person points to the picture of the animal that makes the sound. Presented. Repeat for left ear.  

**OR**  
**Right Ear** Pass □ Refer □  
**Left Ear** Pass □ Refer □

**Option 3: Pure tone audiometric screening.**  
Pure-tone audiometer to test hearing at 500 Hz / 1000 / 4000 Hz  

<table>
<thead>
<tr>
<th>Frequency / Decibel (dB)</th>
<th>500 Hz</th>
<th>1000 Hz</th>
<th>4000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 Hz √ or X</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>40 Hz √ or X</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
SCREENING STATIONS

STATION ONE
NUMBER RECALL

STATION TWO
DIGIT SPAN

STATION THREE
AUDITORY PROCESSING

STATION FOUR
p b d q

STATION FIVE
SPEECH
Bei, Sei, Trey and Cha, Caa, Chor / Chhor

STATION Six
COORDINATION
PHYSICAL PROBLEMS

STATION SEVEN
PHYSICAL PROBLEMS

STATION EIGHT
NEAR VISION

STATION EIGHT
FAR VISION

STATION NINE
HEARING SCREENING

ENTRANCE / EXIT