



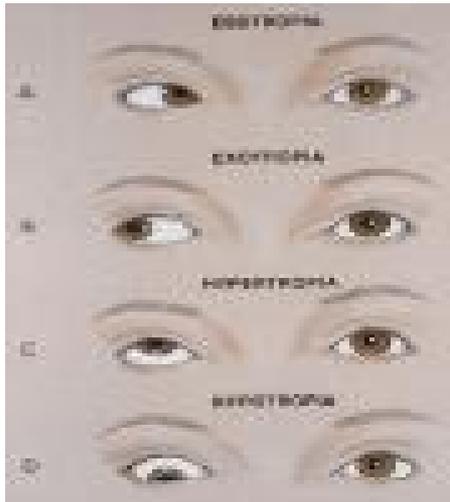
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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN



ISSUES AND STRATEGIES FOR THE VISION IMPAIRED (BLIND) IN THE MAINSTREAM

**PRESENTED BY:
VISUAL IMPAIRMENT SECTION
SPECIAL EDUCATION UNIT
MINISTRY OF EDUCATION
2013**



A · B : C " D " E : F " G " H : I : J :
K : L : M : N : O : P : Q : R : S : T :
U : V : W : X : Y : Z :



PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Strategies in the Classroom

- We work with students who have a significant vision impairment. Students have an eye condition that inhibits their access to the curriculum. Our problem as teachers, then, is to devise strategies for each individual that will allow him or her equitable access to the curriculum.
- We will also ensure the delivery of any special curriculum components that may apply, such as Braille instruction.
 - Students with a vision impairment have difficulty in accessing: ***the environment, the teacher, the learning resources, and print.***
 - Some or all of the following strategies may be useful, depending on the individual student and his or her specific needs at the time.



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

General Strategies (Blind)

Class Handouts

- Submit for Braille
- Put on tape

Student Note-Taking

- Take one notes on Braille
- Take own notes on keynote
- Tape for transcribing later

Homework & Assignment

- Shorten or change task
- Allow additional time for final assignment presentation
- Present in Braille or in print
- Present on tape
(teacher's decision)



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General Strategies (Blind)

Task

During Class

- Be descriptive-vocalize
- Allow student to handle materials
- Allow student close to demo or activities
- Vary presentation
- Substitute activity if not suitable
- Use normal “look” and “see” vocabulary
- Read aloud as you write on the board

Class tests

- Papers in Braille
- Take test orally
- Allow extra time
- Sit in private space
- Put test in tape



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General Strategies (Blind)

Task

Exams

- Extra Time
- Reader/writer
- Papers in Braille
- Braille or type responses
- Dictate responses
- Private space & supervision

‘Screen Reader’

- Useful for background reading.
Good source for Malay and English material. Does not substitute for Braille.



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Strategies in the Classroom (Blind)

Task	
Charts and Maps	<ul style="list-style-type: none">• UPK has a tactile maps.• Create diagrams quickly with spur wheel.• Content simplified to the very minimum necessary.
Audio-Visual	<ul style="list-style-type: none">• Sit close to the source.• Supply a narrative if necessary.• Allow a second, private viewing• Sum of the main concepts orally• Allow alternative activities if really unsuitable



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Strategies in the Classroom (Blind)

Task

Concept Development

- Concept often based on inadequate information and experiences
- Needs lots of hands-on concrete activity to develop concepts.
- Realistic models are useful if available
- Size, texture and shape are important.



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Strategies in the Classroom (Blind)

Task

Organisational Skills

- Essential for student to organize self, materials and time effectively.
- Use loose leaf folders with labeled dividers.
- Always return stuff to same place.
- Provide adequate storage and shelf space in classroom (primary) or a 'home room' (High school).
- Need power point and table for study times.
- Provide secure storage for equipment.

Field trips & Camps

- Safety is an issue. Adequate supervision is essential.
- Braille maps, tasks sheets and other relevant stuff.
- Plan alternative activities if necessary.



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Strategies in the Classroom (Blind)

Task

Teacher Aides

- The Teacher is responsible for the student's learning
- The Teacher Aides helps the teacher reach the learning goals for the student
- The Teacher Aides Should avoid becoming emotionally attached to “their” student
- The student should never become dependent on the Teacher Aide in the classroom, or vice versa.
- If the team is really successful, the Teacher Aide could spend a lot of time in the staffroom reading the paper, secure in the knowledge that the student is functioning independently and confidently in the classroom.



Strategies in the Classroom (Blind)

Task

Discipline

- Treat the student with a visual impairment as you treat other students. Have the same expectation.

Other

- Allow the student to do things for themselves even if it takes longer at first. Practice will improve performance.
- Label classroom objects with Braille relevant.
- Encourage extra-curricula activities as much as possible.
- Call the student by name if you want to talk specifically to him or her in class.
- Introduce yourself if encountering the student. Say, “Hello, Eddy, it’s Mrs Smith here”. Other students need to do this, too.



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Reading

Student who is Blind

- Reading Braille is slower than print.
- There is only a small selection of reading materials in Braille compared with what is available in print.
- The student cannot choose their own books from the library. They are dependent on what we decide to give them.
- Teachers may need to adjust their expectations on volume of reading, and the available titles.
- Reading to younger children is an important strategy for vocabulary acquisition and concept development. Discussing illustrations is also important as these cues are not available to the student.



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MATHS

Student who is Blind

- Incidental learning does not occur.
- Watching and copying others is not an option.
- Use materials that do not move around, and trays to define workspace.
- Student needs far more and longer experience with concrete materials to gain concepts than sighted children do.
- Tend to be good at mental arithmetic.
- Tactile math tools are available. Such as Braille rulers, tactile set squares and protractors (bigger than normal), measuring devices, graph paper, etc.
- Allow use of calculator as long as process is understood.
- Students should learn to read tactile graphs of all sorts.



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MATHS

Student who is Blind

- Producing graphs is difficult. For bar or line graphs, use pins into tactile graph paper on a pin board. For more advanced graphing, such as functions, consider allowing the student to type a **table of relevant points**, but not require the graph drawn.
- Get worksheets, etc., brailled up well beforehand.
- Has to work in Braille—maths cannot be done on a word processor.

Student may need to demonstrate mastery orally to the classroom teacher.

- Never “see” a complete algorithm, only small bits at a time.
- May record only the main steps in an algorithm.
- Geometry can be nightmare. Use solid shapes rather than diagrams where possible. 3D diagrams are meaningless to a student who has no concept of perspective.



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WRITING **Student who is Blind**

- Young children will always use Braille;
- Students should learn to touch-type at about 8 or 9 years of age;
- Whether the more senior student uses a braille or a word processor for a task is up to the teacher;
- Generally, if the student needs later access to it for revision, braille is better. If the teacher wants to take it away for marking, print output is better. For process writing consultations, both would be nice;
- Student does not usually get to see what other students have done, and so has no model for expectations; and
- Student should learn handwritten printing, at least enough to write his or her name. Raised line paper or writing guide is available.



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SOCIAL Student who is Blind

- We learned appropriate social behaviours by watching and copying others, a method not available to visually impaired students;
- More subtle social behaviours such as posture, body language, gesture, eye contact and facial expression may be missing or used inappropriately;
- Behaviours or lack of them can be disconcerting to everyone.
- There is plenty of opportunity for misunderstanding or misinterpreting mood and message; and
- Visually impaired students may need specific teaching to learn social skills.



SOCIAL

Student who is Blind

- ✓ Students blind from birth do not understand vision;
- ✓ We have little insight into the unique world of the blind;
- ✓ It is fairly easy for teachers and other students to empathise with blindness;
- ✓ Socially acceptable disability;
- ✓ Need for training in social skills and TDL if older students are to be acceptable to society (e.g. eating, etc.); and
- ✓ Isolation in the mainstream is an issue: (a) isolation from sighted classmates and (b) isolation from other blind children or anyone who shares the problems and frustrations.



Physical Education

General considerations for physical education for learners with visual impairments:

1. Learn about the student's eye problem. This may make a difference in depth perception, colour vision, field of vision, etc.
2. Use movement as a learning tool. Give the student responsibility for his/her own movement. Do not overprotect them.
3. Use descriptive verbal instructions. Use body-oriented language.



Physical Education

General considerations for physical education for learners with visual impairments:

4. Provide a fun and safe environment. Orient the student to the equipment.
5. Be aware of flying objects. Field restrictions or the speed of objects may cause you to adapt the activity.
6. Blind children tend to have different motor development and some areas are delayed. Generally, watch for low postural tone, diminished strength in upper extremities, poor abdominal strength, lack of trunk stability and inadequate weight shift in walking.



For adapting physical education:

- 1. Adapt the equipment:** Use sound signal behind the goal or target, substitute a brightly coloured or slower moving ball, use a soft ball, or a sound ball, etc.
- 2. Adapt the rules:** define the playing area with tactile boundaries, change the type of movement to one that is safer for a blind child, permit a ball to bounce before catching it, instead of hitting a ball while moving put it on a stand, etc.



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For adapting physical education:

- 3. Adapt the conditions:** slow the activity down, provide clear boundaries or indoor boundaries, allow the blind student to buddy-up with a sighted guide.
- 4. Substitute an activity that may not be appropriate:** take one of the lead-up skills and provide practice, use task analysis to identify a skill that the blind child needs assistance with, etc. if these cannot be organized, you may need to allow the blind child to work on skills of a sport for blind people (goal ball).



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Orientation and Mobility

1. O&M training teaches the student techniques to move about freely and confidently within a given environment.
2. O&M training is provided by qualified personnel, but techniques can be practiced at other times under supervision from teachers or teacher aides.
3. The amount of O&M training will depend on the student's vision, and their ability to use it effectively.



Orientation and Mobility

4. On-site O&M to a “new” site should be initiated during Term 4 of the year previous to the child’s attendance.
5. You can help by showing the child the location of important places and objects in your school and classroom, such as where to hang bags, where the toilets are, etc.
6. O&M training is an ongoing process, as the student’s needs for independent travel mature over time.



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Sighted Guide

1. Refers to the way in which a vision impaired person is safety guided through the environment by a sighted person.
2. The sighted guide technique allows active participation by both the guide and the person who is vision impaired. They act as a team while using this method.
3. The technique provides safety from injury, knowledge of and orientation to the environment, and a comfortable travelling technique which minimize stress.



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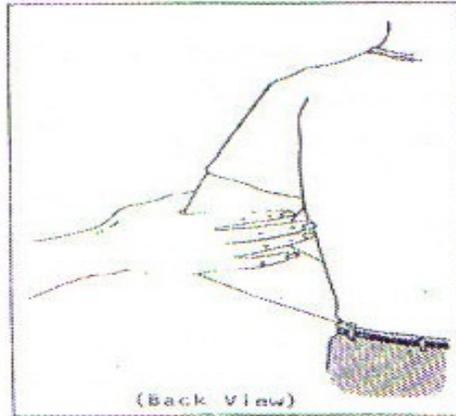
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Have the student:

1. Locate the area just above the guide's elbow;
2. Position the fingers so that the thumb is on the outside of the guide's arm, with the other fingers on the inside;
3. Grip firmly but without undue pressure;
4. Hold the area above the elbow point; and
5. Keep the upper arm against the side to prevent drifting away from the guide.



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Glossary of Specialised Equipment

CCTV -

Closed Circuit Television: used by students with low vision to see print and other small objects more clearly. Comprises a computer monitor or small TV with a camera fitted underneath

Cane -

White sticks used by students who are blind or nearly so, as a mobility and safety aid around school and community

Keynote -

A laptop computer specially designed for blind users. The keynotes is essentially a talking word processor with a few other functions added, such as calculator, address book, etc.



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Glossary of Specialised Equipment

Large Print -

Print made bigger, either by photo-copying or by re-writing, for students with low vision. Not all low vision students need large print. Print should never be made any larger than it strictly needs to be. Over-size print is actually harder to read than small print.

Magnifier -

Hand-held lens for seeing print or other small objects. Useful for short bursts of reading, such as accessing a dictionary.



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Glossary of Specialised Equipment

Monocular **Small telescope** used by some low vision students to see blackboards and other distant things. Hard to use in a classroom.

Tactile Material

Resources for students that have been transcribed into Braille or made into a tactile form such as raised illustrations, maps, maths diagrams, graphs and so on. Time consuming to produce, but very necessary for the student in understanding some curriculum content.



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Glossary of Specialised Equipment

Talking Book

Book on a tape that can be played back in a special machine. Talking books are recorded on four or eight track tapes to keep the number of tapes to a minimum. High school English and Social Studies are particularly well served by Talking Books. Normally used by blind students, and at home rather than at school. Not a substitute for Braille, but a useful complement. Large leisure reading source, too.

Talking Calculator

Basic calculator (i.e. not scientific) used by vision impaired students. Calculator that “speaks” the keys as they are pressed, and also announces the answer when the “ = “ sign is pressed.



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SAFETY RULES FOR A LOW VISION STUDENT AT SCHOOL

- Do not move any object in their surroundings without telling them first. If possible, explain and physically show them where the object was moved to.
- Make sure doors to classrooms are closed or fully opened.
- Push chairs under the table after using them.
- Do not leave cabinet doors open.



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GUIDELINES FOR REFERRING VISUALLY IMPAIRED

CATEGORY	VISUAL ACUITY	FIELD OF VISION
PARTIALLY SIGHTED		
A	6/18 or better	Gross field defect
B	Up to 6/24	Moderate field contraction, medial opacities or aphakia
C	3/60 up to 6/60	Full field
BLIND		
D	6/60 or better	Gross visual field contraction, particularly in the lower field
E	3/60, but below 6/60	Significantly contracted field
F	Below 3/60	Full field



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Example: 1

	Right Eye	Left Eye
Vision	6/36	6/36
Refraction	-9.00/-3.50X180	-9.00/-4.00X180
Near Vision	N6@15cm Binoc	
Anterior Segment	Normal	
Orthoptic evaluation	-	
Fundus	Normal	
Impression	Both eyes – High Myope / Astigmatic with Amblyopia	
Suggestion	?	



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Example: 2

	Right Eye	Left Eye
Vision	6/6	6/6
Refraction	+3.00/-1.00X160	+4.00/-1.50X180
Near Vision	N6	
Anterior Segment	Hypopigmented Iris	
Orthoptic evaluation	Fully Accommodative Squint – Well controlled with glasses	
Fundus	Hypopigmented	
Impression	Both eyes refractive error accomodative squint	
Suggestion	Yearly eye evaluation	



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Example: 3

	Right Eye	Left Eye
Vision	CF @ 1 metre	Artificial Eye
Refraction	White reflex	-
Near Vision	N48 @ 30 cm	-
Anterior Segment	Stromal opacity	-
Orthoptic evaluation	-	
Fundus	No view	-
Impression	Bilateral corneal opacities, LE enucleated in 1994	
Suggestion	?	



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Example: 4

	Right Eye	Left Eye
Vision	Hand Movement	CF @ ½ metre
Refraction	Hand Movement	CF @ ½ metre
Near Vision	Plano	+3.00D.S/-0.50 D.SX65
Anterior Segment	Nystagmoid Movement	
Orthoptic evaluation	-	
Fundus	Normal	
Impression	Congenital Blindness	
Suggestion	?	



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PERKHIDMATAN BANTUAN KHUSUS SENSORI PENGLIHATAN

Video
(Toodler using cane)



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