

# **A CASE FOR GRADE 1 BRAILLE**

## **Advantages of Uncontracted Braille**

**By Ann Adkins, Education Specialist, TSBVI Visually  
Impaired Outreach**

## **ONE IS FUN**

**Marjorie Troughton**

# Advantages of Uncontracted Braille

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*Abstract: This article describes the advantages of teaching and using uncontracted Braille to meet the literacy needs of visually impaired students.*

*Key Words: programming, literacy, reading, Braille, uncontracted Braille, contracted Braille, Grade One Braille, Grade Two Braille, alphabetic Braille*

In an effort to meet the needs of all visually impaired students, teachers of the visually impaired (TVIs) must explore all forms of literacy and be able to teach them to their students. In the "News and Views" section of this edition of *SEE/HEAR*, Phil Hatlen encourages us to expand our definitions of literacy to include a variety of types of literacy, including print literacy, Braille literacy, tactile literacy, auditory literacy, and media literacy. In our ongoing look at literacy, we encourage teachers, students, and parents to consider all options, including a combination of approaches to literacy. In this article, we would like to examine the use of uncontracted Braille (also called Grade One Braille or alphabetic Braille).

For tactual learners, literacy should not be limited to the use of contracted (or Grade Two) Braille. In the past, many TVIs in Texas have emphasized the use of contracted Braille and, for some, Braille literacy has even been defined as the ability to read and write in Grade Two Braille. This may have been because most instructional materials used contracted Braille (such as the Patterns program from the American Printing House for the Blind) and because most Braille books were printed in contracted form. Other reasons for emphasizing the use of contracted Braille were discussed in a previous *SEE/HEAR* article, "[Reading for Everyone: Expanding Literacy Options](#)" by Cyral Miller and Ann Rash (Summer 2001), which described the results of a survey of VI professionals. The primary use of uncontracted Braille seems to have been with students who had learning problems or additional disabilities, and the results of the survey showed that uncontracted Braille can "increase literacy options for visually impaired students with multiple disabilities." (Miller and Rash, 2001). One common belief seemed to be that uncontracted Braille was a good method only for students who were not able to master the contractions of Grade Two Braille. In the list below, we encourage you to consider why other students might benefit from uncontracted Braille as well.

1. Uncontracted Braille can provide increased opportunities for literacy. Miller and Rash (2001) describe its use by a variety of VI professionals to expand literacy options for all tactual learners.
2. Uncontracted Braille works well with phonics-based reading programs, which are found in many elementary classrooms. Uncontracted Braille provides 1-to-1 correspondence and promotes letter/sound associations, important components of literacy instruction. The use of contractions does not reinforce basic phonics skills.

3. When students use uncontracted Braille, they can participate in reading lessons with their sighted classmates. They can use the same reading materials as their peers, only in a Braille format.
4. Teaching materials are now available to teach uncontracted Braille, such as [\*Un's the One: Uncontracted Braille FUNdamentals\*](#), from TSBVI, and [\*One is Fun\*](#), by Marjorie Troughton. A greater variety of books are now available in uncontracted form (see [www.braillebookshare.com](http://www.braillebookshare.com)), and the Texas Education Agency (TEA) is currently working to provide textbooks and assessments in uncontracted Braille. These changes help alleviate the concerns of many TVIs about having adequate materials and curricula to support instruction in uncontracted Braille.
5. Because there is a letter-to-letter correspondence between uncontracted Braille and print, it is easier for sighted peers, parents, siblings, and teachers to learn to read uncontracted letters. Everyone in a Braille reader's life can be a participant in his literacy.
6. Uncontracted Braille allows for immediate feedback from a classroom teacher. She doesn't have to wait for the VI teacher to transcribe Braille once she learns the basic letters or consults a cheat sheet.
7. Because the rules of spelling are the same in uncontracted Braille and print, students can sound out and spell words at the same time and in the same way as their classmates.
8. 39 of the 50 most common words in English have contractions when written in Grade Two Braille. Many also include lower cell signs. According to *The Reading Teacher's Book of Lists* (Prentice Hall, Fourth Edition, 2000), these words make up about one third of all printed material and are the words elementary teachers emphasize to their students as "instant words." Examples include many common words such as the, and, of, from, for, and it and lower cell words such as be, to, in, was, were, and his. Common suffixes also appear in early reading and involve the use of Braille contractions, such as -ing, -ed, -er, -est. The use of contractions in these early words makes reading more difficult for beginning Braille readers.
9. There are 180 rules to learn in uncontracted Braille compared to 450 rules for contracted Braille.
10. Uncontracted Braille can promote greater speed and fluency in reading (Troughton, 1992. Miller and Rash, 2001).
11. Uncontracted Braille can promote more interaction with peers. Sally Mangold reported in the *Braille Monitor* (October 2000) that Minnesota students showed greater interaction and participation with sighted students, both academically and socially. Marjorie Troughton's research also showed greater peer interaction when students used uncontracted Braille.
12. The Minnesota teachers (Mangold, 2000) and the teachers involved in Troughton's study also reported higher academic achievement scores, in both reading rate and accuracy, with uncontracted Braille than with contracted Braille.
13. In *One is Fun*, Troughton described how motivation and interest in reading improves with the use of uncontracted Braille. Although difficult to measure, teachers in her study noted that it encouraged thinking

- rather than memorization, allowed their students to help their sighted classmates, and was “great fun.” Miller and Rash also cite *Instructional Strategies for Braille Literacy* (AFB, Wormsley and D’Andrea, 1997), which showed that uncontracted Braille can promote self-esteem.
14. Uncontracted Braille facilitates a quick transition from print to Braille for adults and adventitiously blind students (Mangold, 2000). Uncontracted Braille offers early successes with the mechanical challenges of Braille reading (Miller and Rash, 2001), and these successes can be easily recognized and supported.
  15. Uncontracted Braille can be a successful approach to reading for students who later transition to the use of contracted Braille (Miller and Rash, 2001).
  16. Fewer reversal errors have been reported when using uncontracted Braille, especially for those students who use uncontracted Braille for a longer period of time before they transition to contracted Braille (Troughton, 1992).
  17. Uncontracted Braille works well with a linguistic approach to reading.
  18. Uncontracted Braille works well with ESL students and foreign languages.
  19. Uncontracted Braille works well for students using dual media for literacy, such as those students who use print but need Braille as well.
  20. Uncontracted Braille can work well with deafblind students because finger-spelling does not correlate with Braille contractions.
  21. Because it matches print letter for letter, students can use uncontracted Braille in a variety of board games (Monopoly, Scrabble), card games (Uno), and leisure activities with sighted friends and family members.
  22. Troughton found that because it is easier to write in uncontracted Braille, children can write their own compositions sooner and can write more independently.
  23. Marjorie Troughton found that books written in contracted Braille do NOT take up significantly less space than the same books written in uncontracted Braille. Research presented at the CEC National Convention in 1999 showed that contracted Braille only saved 20% (Ross, Scheira, & Urick).
  24. Uncontracted Braille can make production of Braille materials easier and helps with computer-assisted Braille (Troughton).

Many of the ideas in this article were generated as part of a Braille Study Group to improve the Braille and literacy skills of visually impaired students in Texas. We hope that you will discover other advantages as you explore the uses of uncontracted Braille, and we encourage VI teachers, students, and parents to examine all literacy options. We also encourage you to contact the VI Outreach team with information about your experiences with uncontracted Braille (Ann Adkins at 512-206-9301 or [annadkins@tsbvi.edu](mailto:annadkins@tsbvi.edu)) . Ann Rash, Education Specialist with TSBVI Visually Impaired Outreach, is currently collecting data on the use of uncontracted Braille in Texas and invites those who are interested in trying uncontracted Braille to contact her (at 512-206-9269 or [annrash@tsbvi.edu](mailto:annrash@tsbvi.edu)) to participate in the collection of this data.

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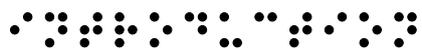
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# ONE IS FUN

Marjorie Troughton

## INTRODUCTION



## TERMS OF REFERENCE

Grade One Braille uses raised dot patterns to represent the letters of the alphabet, punctuation marks, numbers and some composition signs which are unique to braille. Grade Two Braille adds many contractions and short form words.

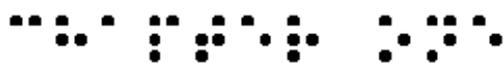
The official terms used by the International Council on English Braille are Grade One Braille and Grade Two Braille. However, for variety and for ease of reading and understanding the following terms will also be used to refer to Grade One -- alphabetic or uncontracted and Grade Two may be referred to as contracted.

Thus,

GRADE ONE BRAILLE = ALPHABETIC BRAILLE = UNCONTRACTED  
BRAILLE

GRADE TWO BRAILLE = CONTRACTED BRAILLE

## CHAPTER ONE



# RESEARCH AND EXPERIENCE

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### INTRODUCTION

The first chapter contains excerpts from speeches given by the author. Some portions have been updated.

I Grade One Braille - An Alternative for Some Blind People presented in 1988 in London, England

II Braille Literacy presented in 1990 in Edmonton, Alberta

III Bits and Bites short excerpts from other presentations

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### 1

## GRADE ONE BRAILLE

### AN ALTERNATIVE FOR SOME BLIND PEOPLE

For some blind people, Grade Two Braille has opened doors to better education, literature and employment. For others, Grade Two Braille has closed those doors. However, Grade One Braille can keep the doors open for many more people.

It is evident to insightful teachers of braille that the complexities of Grade Two constitute an additional educational handicap for some of their students.

Only a few of the people who should use braille do in fact use it. The latest estimate is less than 10%. Fewer people use it well. The main reason is the

Grade Two Braille code itself. It is too complex and too complicated for some people.

Only a few of the blind students in school who should use braille do in fact use it. According to the last survey in America, less than 20%. Fewer use it well. The main reason is the Grade Two Braille code itself. For many students, there is neither the time nor the resources needed for them to learn such a complex and complicated code. Students with learning disabilities, do not possess the skills necessary for mastering all the shapes and rules. Because it can solve these problems, Grade One Braille is better for some students.

Then why do many people insist that everyone should use Grade Two Braille and that all books should be published in Grade Two Braille?

Why not teach Grade One Braille when appropriate? Why not give the people who want to use Grade One Braille the right to use it? Why not publish and distribute Grade One Braille books and materials? The first part of this chapter addresses these questions and offers a practical solution.

The first part of this chapter is divided into six parts.

The first section is a summary of some of the literature and research on braille problems.

The second section briefly describes a research project comparing the results of reading and writing Grade One Braille with the results of reading and writing Grade Two Braille.

The third section attempts to explain learning disabilities and how they affect a person's ability to use braille.

The fourth section is a comparison of achievement scores when using Grade Two Braille with achievement scores after switching to Grade One Braille.

The fifth section briefly describes another research project on the teaching of reading to beginning primary students. It compares a group of intelligent children who learned to read and write using Grade Two Braille from the start with a matched group who learned to read and write using Grade One Braille at the beginning and then later learned the contractions for Grade Two Braille and from then on used Grade Two for all their reading and writing.

The last section contains a summary and conclusions.

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## **PART I**

### **BRaille HISTORY, RESEARCH AND LITERATURE**

Let us look at the history of the development of braille codes. The acceptance of the use of only contracted braille was the result of a battle of personalities, politics, and administrators - it was not the result of discussions emanating from research and practical use. Robert Irwin in a booklet called "The War of the Dots" describes the struggle of people attempting to get a consensus on a uniform English language braille code. After many years and several different codes, the decision was a compromise and perhaps the best that could be reached under the circumstances at that time.

From 1917 to 1932 books published in the United States were practically all in Grade 1½. In 1932 for the sake of uniformity the Library of Congress adopted Grade 2 for High School books. By 1950, all books except for first grade were published in Grade 2 Braille. Now all books are published in Grade 2 Braille.

When these decisions were made, it was not possible physically or financially to publish books in two different codes. However, with today's technology, computers, scanners and printers, it is no longer impractical. The reasons for only one code are no longer valid. The reasons for two codes are very evident. It is time that a larger percentage of possible braille users be given the opportunity to have a code that is useful to them.

Let us review the literature and research on braille. Researchers have shown not only that very little space is actually saved by many of the contractions, but also that the multiplicity of contractions retards reading development and slows reading speed. It has been shown that because decoding Grade 2 Braille requires extended intellectual effort, less cognitive resources are available for interpreting information.

At the International Conference on English Braille Grade Two, held in Washington in 1982, I presented a paper stating the need for a simplified braille. Several other papers, which were presented at that conference, also stated that there was a definite need for a simplified braille.

Martin Milligan of Britain said that we need a two tier system of braille, one simpler and one more complex. He went on to say that it seems extremely doubtful whether the braille authorities have the right to require the braille-using public to go on using a grade of braille which for many of them rewards the effort of learning so unnecessarily poorly, and makes both reading and writing braille unnecessarily laborious and slow. He felt that major changes in code simplification are appropriate now.

Connie Aucamp of Africa stated that fewer contractions would make braille easier for those for whom English is their second language.

Marjorie Bolton discussed the results of the research project of The Universities of Warwick and Birmingham. She showed that we now have

statistical evidence that there is a need for change. She wondered why it is so difficult to persuade people to change.

Carlton Eldridge claimed that we are settling today for less educational standards for blind students than for sighted students. He stated that a braille reader should have a choice of grade levels of braille.

Bertil Nilsson showed that with less attention to individual characters the reader is able to use clues from context and from redundancy of language. He felt that Grade 1 Braille would prove most useful and was essential for multilingual persons.

However, both before and since that International Conference many other people have voiced their concerns about the tremendous complexity of Grade 2 Braille.

Barry Hampshire showed that Grade 2 Braille interferes with language patterns. It causes problems because of discrimination difficulties of the symbols. When the perception of characters requires extended intellectual effort, the reader cannot use other clues from context or from expectations or from stored information. The complexity of braille means only a small group of the educated elite can use it. However, in research projects, the less able are not receiving their share. He also stated that the rules of braille are too complicated to allow for the best benefits of the computer.

Nolan and Kederis noted that the speed of character recognition is directly related to mental ability, that contractions increased recognition time of unfamiliar words, and that Grade 2 Braille is an additional educational handicap. Slow readers become even slower when contractions are present. The omission of many characters would result in increased speed, but only a little more space.

J. Gill stated that the integrated student has comparatively poor performance in braille, but if braille was easier its use would increase.

S. C. Ashcroft discovered that in written work, spelling errors are often braille errors. He said that if people aren't motivated they won't learn and if the task is too difficult they won't be motivated. The code needs to be simplified because it has gone past the point of diminishing returns. The space saved is not worth the effort of learning all those contractions. Because braille is more difficult a child must spend more of his time reading.

B. Heckle showed that the complexity of the code delays educational use because the young print-using child is able to record his own knowledge and thought long before the braille-using child who is still learning the code and basic writing skills.

John Lorimer pointed out that 14 signs saved as much as all the other signs. The 45 least used signs save less than 1% of space in a book. There are about 180 rules and meanings for Grade 1, but over 450 rules and meanings

for Grade 2. Because of this added complexity, training in braille reading needs to continue much longer, to a more advanced level and more systematically. His research showed that the number of braille forms needs to be reduced. We need to ease the learning load of braille by eliminating confusers and multiple meanings, and by pruning out the dead wood.

Bill Poole said that a simple basic code should not contain contractions of the type known to cause perceptual or cognitive difficulty.

Emerson Foulke remarked that because of the complexity of the code, the hiring and training of transcribers is long and difficult.

P. Bagley and D. Brown both emphasized that the main cost of computer-assisted braille is editing and proofreading caused by the complexities of the Grade 2 Braille code. If costs are to be lessened, the code must be simplified and have straightforward rules.

H. Ziegel and M. Ostendorff cited many advantages of eliminating contractions. There are always spaces between words. There are not so many fine differentiations. Because initial sounds and other helpful clues are more often present, a child can use phonetic skills more, and thus read independently sooner. Because it is easier to write, children can write their own compositions sooner when they are most imaginative. Slow learners can cope better.

Helene Koehler notes that because most educators ignore Grade 1 and Grade 1½ Braille, many people have been deprived of the privilege of reading and using braille. There are many people who are discouraged from learning braille and from finishing their studies of braille because of the complexity of Grade 2 and because of the many signs which must be memorized.

Tom Maley noted that if braille had been easier some people would not have dropped it, that no publications are geared to the newly blinded, that contracted braille differentiates the blind, that history and familiarity are the only reasons for Grade 2 Braille, that there is a growing interest in braille literacy to allow more people to read, but we must have an easier code for the ordinary person.

Kerstin Fellenius points out that the contracted braille code confuses, masks and contradicts the cues which a beginner needs in order to encode the language patterns. It is important that contractions not be used in the beginning.

Louise Johnson noted that every time a child reads a story using Grade One Braille, the understanding of how words are put together is reinforced. However, when using Grade Two most contractions do not reinforce basic phonics skills and a vital education step for spelling and reading is skipped. The integrated blind child should learn to sound out words and spell them at the same time as his classmates. He should not be given symbols which do not fit it at the time.

The list goes on and on. Many other people have voiced their concerns about the complexity of Grade 2 Braille. Many research projects have shown advantages of fewer contractions, but already we can see many people are saying the same thing. For some people, Braille Grade Two is too difficult.

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## **PART 2**

### **A RESEARCH PROJECT COMPARING READING AND WRITING BRAILLE GRADE TWO WITH READING AND WRITING BRAILLE GRADE ONE**

Participants in this study were tested in three different areas. In one test they read lists of words - two lists in Grade One Braille and one list in Grade Two Braille. Data was collected for time and for errors.

Another part was reading stories - two stories in Grade One Braille and one story in Grade Two Braille. Data was collected for time, errors and comprehension.

The third part was writing sentences. A group of sentences in Grade One Braille and another group in Grade Two Braille. Data was collected for time, errors and comprehension.

In all areas tests were matched for length and difficulty.

All braille using students in various types of programs and settings in the Province of Ontario were invited to participate and over 90% did. Several adults also were tested. One hundred and fifty people offered but only 125 were used because 25 were already using Grade One Braille.

Of the 125 Grade Two Braille users, 67 were male, 58 female. The age range was from 6.6 years to 70.9 years and the average age was 17.7. Forty-one were totally blind, 55 had light perception and 29 had more than light perception. Ninety-three were blind from birth and 32 were blinded later in life. Seventeen had additional physical handicaps. Forth-three had learning disabilities. One hundred and four used a braille and 21 used a slate and stylus. I.Q's ranged from 56 to 155 with an average of 97. Braille was the primary reading mode for 101, tape for 17 and print for 7.

Average listening comprehension was grade 9 level and ranged from grade 3 to university graduate level. Years of using braille ranged from 1 year to 50 years with an average of 9.6 years.

Previous studies comparing Grade One Braille with Grade Two Braille had always used contracted words and passages and then had written them out letter by letter. The data could not determine how much of the difference was due to reading something in a different form than the form the reader was used to seeing, and thus the data was not valid.

In this study a third dimension was included - reading and writing words which are always written letter by letter, the form the reader was used to seeing. Thus each participant read (a) regular Grade Two Braille (b) Grade One Braille which included words which ordinarily would have been contracted but were written out letter by letter (c) Grade One Braille which included only words which would always be written out letter by letter.

Because the comparisons between (a) and (b) produced similar results to previous studies only the comparisons between (a) and (c) will be shown. This is a true comparison between uncontracted braille and contracted braille.

Table One indicates that Grade One Braille made a positive significant difference in all areas in each part of the test.

For those not familiar with research terms, the following is a very brief explanation of the terms used in the tables. M is the mean or average score. SD is standard deviation which is a measure of the spread of a distribution of scores. F indicates the significance between the two means and zero.  $P < .01$  shows that the significance has less than one chance in a hundred of happening by chance. This is the best rating that these research statistics can give.

All timing was in seconds. All tests were matched for number of words, number of syllables in words, number of letters within words, total number of letters and difficulty of words. To make sure they were equal in all respects, print copies of tests were used in a pilot study with print-using readers of various abilities and ages. Four excellent readers, 4 average readers, and 4 poor readers from each of the following grade levels were used - Grade 3, Grade 6, Grade 9, and Grade 12. Thus a total of 48 sighted students participated. There was no significant difference in time, comprehension or errors among the tests. There was a small difference in one area. The Grade One paragraph did take a little longer to read in print probably because of its lack of natural flow of language. However, this small disadvantage for the Grade One paragraph could not be avoided because so many common words could not be used in it.

When comparing the numbers of embossed cells, there is, of course, a difference between the Grade One tests and the Grade Two tests. The story in Grade Two Braille had 229 embossed cells. The story in Grade One Braille had 308 embossed cells or 34% more and it took 23% more space. The list in Grade Two Braille had 104 embossed cells. The list in Grade One Braille had 166 embossed cells or 59% more and it took 39% more space. The sentences for writing in Grade Two Braille had 172 embossed cells. The sentences for Grade One Braille had 219 embossed cells or 27% more and they took 20% more space.

All the participants in the braille testing had completed learning Grade Two Braille. None had ever used Grade One Braille. The only criteria used in selecting the participants was their frequent use of Grade Two Braille.

The testing was done by school teachers and rehabilitation teachers who were given specific instructions for the administration of the tests. All tests were conducted individually. In the writing test a sentence was dictated. As soon as each sentence was completed the next sentence was dictated immediately.

When reading the list in Grade One Braille, 102 people (81.6%) had no errors while only 25 people (20%) had no errors when reading the list in Grade Two Braille. When writing in Grade One Braille 46 people (36.8%) had no errors while only 4 people had no errors when writing Grade Two Braille.

When all 8 items were scored, 113 subjects performed better with Grade One Braille while only 11 performed better with Grade Two Braille.

The following were not differentiating factors between the two groups: age, sex, amount of sight, age of onset of blindness, additional handicap, intelligence, years of using braille, writing apparatus, or primary reading mode. The only item which differentiated the groups was learning disabilities. Blind people with learning disabilities read better and wrote better when using Grade One Braille. Ninety-eight per cent of those with learning disabilities and 93% of those with probable learning disabilities performed better with Grade One Braille while 65% of those without learning disabilities also performed better with Grade One.

**Table One**

	GRADE ONE		GRADE TWO		GRADE TWO		
Reading Words	M	SD	M	SD	M	SD	F
Time	101.38	69.59	157.32	131.07			35.70*
	103.60	89.88			144.77	133.40	22.06*
Errors	0.66	1.68	6.51	5.27			93.02
	0.65	1.94			4.70	6.98	28.93
	GRADE ONE		GRADE TWO		GRADE TWO		
Reading Story	M	SD	M	SD	M	SD	F
Time	154.73	114.09	205.76	190.20			15.25*
	172.31	158.41			234.37	255.34	19.47*
Comprehension	6.06	1.80	4.97	1.72			21.95*
	6.35	1.44			4.79	1.93	38.37*
Errors	1.44	3.74	3.36	5.16			19.88*
	1.35	3.78			4.76	7.85	23.24*
	GRADE ONE		GRADE TWO				
Writing Sentences	M	SD	M	SD			F
Time	246.89	214.86	276.35	245.35			19.20*
Comprehension	6.86	1.38	5.29	2.09			106.78*
Errors	2.69	3.74	12.15	10.88			55.79*

## **PART 3**

### **LEARNING DISABILITIES AND HOW THEY AFFECT A PERSON'S ABILITY TO LEARN CONTRACTED BRAILLE**

A learning disability by definition implies a discrepancy between capacity for learning and actual achievement. There is poor achievement in one or more of the subjects of reading, writing, spelling and mathematics. It is not a result of mental retardation, sensory deprivation or cultural or instructional factors-- although, these may compound the learning problems.

For the participants in the previous study who did not have learning disabilities, the data available indicated that listening comprehension was tenth grade level, reading was tenth grade level and spelling was tenth grade level.

For normal learners all three areas tested to the same level. But for participants who did have learning disabilities, listening comprehension was tenth grade level, reading was seventh grade level and spelling was only fifth grade level. Reading tested lower than listening comprehension and spelling tested much lower when learning disabilities were present.

The Ontario Ministry of Education states that students with learning disabilities now constitute the largest single category of exceptional pupils in Ontario schools. The main learning difficulties for these students are lack of ability to sustain selective attention, inability to remember rules and exceptions to rules, inability to perceive shapes correctly and confused orientation in space and time.

It is no wonder that these people cannot become proficient in Grade Two Braille. They lack the essential skills necessary for success.

For the learning disabled student, Grade One Braille eases the problems. Less selective attention is required, there are fewer rules and exceptions to rules, and there are fewer shapes to be confused with other shapes that differ only in orientation in space.

The estimates of the percentage of visually handicapped people with this additional handicap ranges from 20% to 60%. Of the 150 people approached for the above study 45% had learning disabilities and another 20% had probable learning disabilities. This is an astounding percentage which cannot be ignored! Yet, up to now, research has ignored braille users with learning disabilities.

Unless you have taught braille reading and writing to many different types of students, it is difficult to understand why the characters of braille should cause such problems for so many people, especially those with learning disabilities. Why is it that decoding braille requires such extended intellectual effort, and thus makes some cognitive resources unavailable for interpreting information?

In your home you have several electrical circuits. If you overload a circuit by plugging too many things into it, you will blow a fuse and nothing will work. Similarly, your brain has several circuits. If you overload a circuit by plugging too many things into it, you will blow a fuse and nothing will work. The complexities of the contracted braille code overload the brain circuits for many people and prevent them from reading and writing as well as they could.

For example, in print the letter combination "ou" has 5 basic sounds: as in soul, as in soup, oo as in should, ou as in out and u as in touch. Already the circuit is loaded just about to capacity. So what does braille do? It adds complications - "ou" is a character (the reverse image of the letter t) - alone it says out - but not in outside - : "ou" character is always used whenever those letters appear in print - unless they overlap part of a prefix or part of a suffix - or part of a compound word - except when "ou" is followed by "nd" and then you must use dots 4-6-d - and except when "ou" is followed by "nt" and then you must use dots 4-6-t - except for the exceptions. For some people the fuse has already blown but we shall continue.

Sometimes "ou" is followed by "gh". There are at least 6 different pronunciation possibilities for "ough": as in though, o as in bought, as in through, ou as in bough, off as in cough, uf as in tough. For some more people their fuses have blown. So what does Grade 2 Braille do? Well, first you have two characters "ou" and "gh" (easily confused by similar images "ar", "wh", "s") - except for through which is dot 5-th, and except for enough which is "en" except when it is not, and except for ought which is dot 5 -ou - if it keeps its own original sound - except for the exceptions - Poof - some more fuses have blown. The only people left are those with extra heavy wiring in their circuits.

This phenomenon is repeated over and over and over again in Grade Two Braille. It is no wonder that so many people just give up and don't use braille at all. It is no wonder that a person with learning disabilities cannot cope.

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## **PART 4**

### **USING BRAILLE GRADE ONE AFTER SWITCHING FROM BRAILLE GRADE TWO**

One study involved 20 students who were having problems with Grade Two Braille and after several years of using it decided to switch to Grade One Braille. The comparison is made between achievement scores when using Grade Two Braille and achievement scores after switching to Grade One. A second comparison is then made with amount of progress per year when using Grade Two and amount of progress per year when using Grade One.

Table Two shows that much more progress was made in all three reading areas by all participants when using alphabetic braille.

When these students were using contracted braille they averaged only 2 months reading progress per year. When these students were using alphabetic braille they averaged over 17 months reading progress per year. Wow!

Older students in integrated programs who are not proficient at using contracted braille are isolated from their classmates. When some of the students switched to using alphabetic braille they were then able to become part of the group because their classmates easily learned alphabetic braille. They were now able to complete work more quickly and accurately. Self-esteem and social interaction improved.

Another study involved 16 younger students with learning disabilities who were having problems with contracted braille.

Data from the reading tests of these 16 students were used in the graph below. All students had used Grade Two Braille from the beginning. After 3 years some of the students switched to Grade One Braille and some continued using Grade Two. After 2 more years some of the Grade One users switched back to Grade Two.

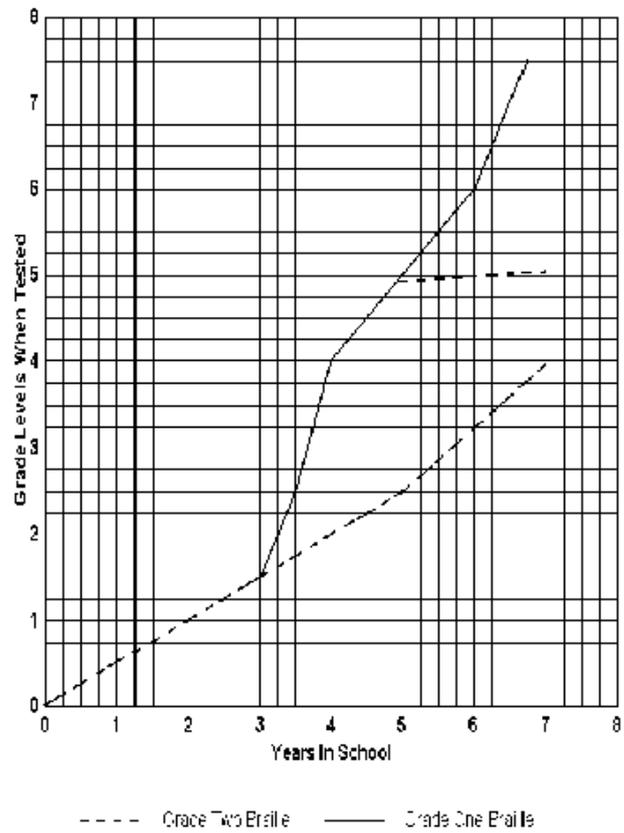
The graph clearly indicates that students with learning disabilities obtained far better results not only when they began using Grade One Braille but also when they continued to use it.

**TABLE TWO**  
**READING PROGRESS PER YEAR**

	VOCAB		PHONICS		STORY	
	Before using one	After using one	Before using one	After using one	Before using one	After using one
1	.35	.73	.25	.87	.18	1.10
2	.03	.60	.03	.70	.01	.57
3	.56	1.30	--	--	.55	1.30
4	.11	1.40	.09	1.9	.11	1.30
5	0	1.30	.05	1.4	0	.60
6	.73	1.50	--	--	.65	2.80
7	.21	.45	.06	.55	.19	.55
8	.31	2.20	.42	--	.40	1.55
9	.05	1.70	.05	1.50	0	.90
10	.30	1.10	.17	2.70	0	4.10
11	0	.70	.40	.90	0	.90
12	.08	.85	.08	.35	0	.45
13	.35	2.40	--	--	--	--
14	.51	2.90	--	--	.44	3.70
15	.28	.83	.28	.33	.21	.60
16	.26	1.15	.26	--	.34	.60
17	.40	2.10	.42	2.00	.02	2.00
18	.03	2.55	.13	2.45	.04	2.45

19	.40	3.35	--	--	--	--
20	0	2.70	.03	3.10	0	3.10
Total	4.96	31.81	2.69	15.5	3.14	28.57
Average	.25	1.59	.18	1.29	.17	1.58

Graph One  
Performance On Reading Tests



## **PART 5**

### **A RESEARCH PROJECT FOR BEGINNING PRIMARY STUDENTS**

The purpose of this study was to determine if teaching primary children to learn to read and write using Grade One Braille would be detrimental to anyone. Since it had already been shown that those with difficulties did better with Grade One this study included children of average and above average intelligence. The groups were matched for age, intelligence and school setting.

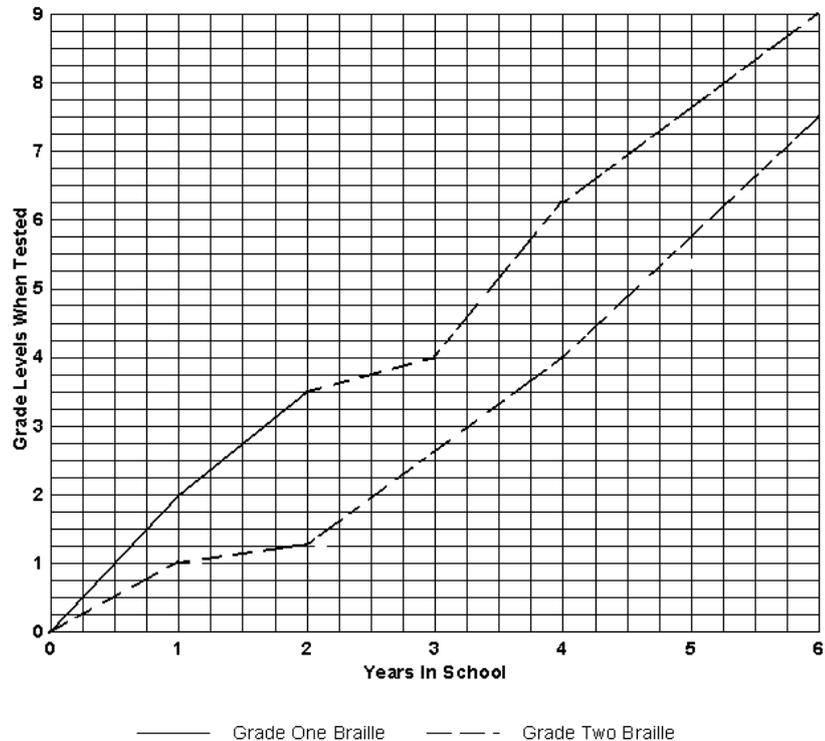
Fourteen children participated in this study. They were tested in listening comprehension, spelling, reading vocabulary, phonics and paragraph reading. After 3 years reading speed was also recorded.

The following tables show positive significance in all areas of spelling and reading for the children who learned to read using Grade One Braille. Listening comprehension, I.Q. and age had no significant differences. In fact, children who began with alphabetic braille did as well after 2 years as children who began with contracted braille did after 3 years.

Data from the reading tests of 14 bright students were used in this graph. One group learned to read and write using Grade One Braille and then after 2 years switched to Grade Two Braille. Another group learned to read and write using Grade Two from the beginning.

The graph clearly indicates that when they learned to read and write using Grade One Braille the bright students obtained better results and continued to show higher scores over several years even after they learned and used Grade Two.

Graph Two  
Performance On Reading Tests



The teachers who used the Grade One Braille in the primary classes were all pleased with the results. They felt that many of the best things could not be measured. There was a good indication of individual learning styles. Each child could use his own individual strong points. There was a lack of reversal problems. The children could write with more independence. The print and braille students could do the same things together much sooner. The children could read to themselves or to a friend. Word games could be played. It encouraged thinking rather than memorization and it was great fun.

Primary children in integrated programs could spend more time with their classmates when using Grade One Braille. The classroom teachers were able to help because they could learn the braille quickly. The children were able to help their sighted classmates.

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## **PART 6**

### **SUMMARY AND CONCLUSIONS**

This chapter has dealt with the topic of Grade One Braille from many angles. In previous literature and research many people have pointed out the problems of Grade Two Braille and have advocated the use of Grade One Braille for some people.

The research cited in this chapter has been ongoing for many years. Every aspect covered showed positive results for the use of Grade One Braille.

The research comparing Grade One with Grade Two showed for most participants positive results for time, accuracy and comprehension when reading and writing using Grade One Braille. Even greater positive results were shown for those with learning disabilities. Thus students with learning disabilities should use Grade One Braille.

Great improvement was shown for those people who switched from Grade Two to Grade One. Every person scored higher in reading and spelling. Thus anyone who is having problems with Grade Two should switch to Grade One.

The intelligent primary students who learned to read and write using Grade One Braille scored much higher in reading and spelling. They even maintained their superior performance after they changed to Grade Two and kept their higher scores for the duration of this study. Thus after 6 years they were still scoring higher than their counterparts who used Grade Two from the start. Thus every child should learn to read and write using Grade One Braille, and only some should later learn Grade Two.

Thus teachers of children with learning disabilities and teachers of beginning primary students should consider using Grade One Braille for their reading and writing programs.

Many people would find Grade One Braille beneficial. The following is a partial list:

1. those with learning disabilities
2. those with limited intellectual ability
3. those with limited tactual sensitivity
4. those for whom English is a second language
5. many school children in integrated programs
6. newly blinded youth and adults

7. those with limited vision who can do some work with large print, but need braille as well
8. the deaf-blind
9. teachers, including regular classroom teachers
10. classmates of blind students
11. parents of blind children and children of blind parents
12. some people with brain tumors
13. young children learning to read
14. preschool children
15. participants in adult literacy programs

We must not only teach Grade One Braille, but also we must allow many people to use it and we must supply materials for them in Grade One Braille.

Let us open the doors to better education, literature and employment by encouraging the use of Grade One Braille for those who need it.

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## II

# BRaille LITERACY

1990 is International Literacy Year. It is a time for action to improve literacy for all people - for the present and for the future. It is a time for action to improve literacy for blind and visually impaired Canadians - for the present and for the future.

Let's look ahead and talk about the future of braille in the age of technology. Looking ahead reminds me of something Wayne Gretzky has said. I believe most of you here know about Wayne Gretzky, that marvelous hockey player from Brantford, who came to Edmonton and then defected to the states.

No matter what you think of his relocating, he does return to each of our great cities from time to time. He comes to Brantford each June for the Gretzky Baseball Classic to raise money for the CNIB library so that more braille and talking books can be produced.

He may be the greatest hockey player ever. When asked for his secret, Gretzky says, "I skate to where the puck is going to be, not to where it has been."

This is how we must look to literacy and braille, to look ahead to where the puck is going to be and to be prepared to meet the challenges we will encounter on the way.

In March of this year, CNIB produced a report, "Literacy - An Issue for Blind and Visually Impaired Canadians". I was pleased to be a member of the advisory committee for this report. We received submissions from across all the country and had presentations in Vancouver, Saskatoon, Toronto and Halifax. This report made 30 recommendations so that funding could be obtained to help us move forward to where the puck is going to be. I shall mention several of these recommendations later.

First let's get a definition for literacy. Literacy is the ability to read and write at a level that would enable an individual to meet daily living needs. Literacy is a continuum from basic reading and writing skills all the way up to various technical literacies. It is different for different persons, in distinct times and various places.

For blind and visually impaired people, access to material is an integral part of both developing and maintaining literacy skills for present and future needs.

What role should braille have in literacy? Is it as important as it used to be? Should it be ignored as it is in many places?

I shall list some of the reasons given by others for NOT using braille and then I shall expand on each one in greater detail.

1. negative attitudes towards blindness in general and braille in particular
2. increased emphasis on use of residual vision
3. improved technological systems of communication and increased use of audio-tape and voice output devices
4. lack of choices in educational service delivery systems
5. inadequate teacher training programs
6. increase in percentage of slower learners
7. large number of blind and visually impaired persons with learning disabilities
8. large percentage of blind persons who are elderly
9. complexities of the contracted braille code.

The second reason, increased emphasis on the use of residual vision is tied to the first reason, negative attitudes. Fred Schroeder, who has personally experienced both of these, has expressed it this way. I quote him,

"Both my family and I assumed that the tasks around the house routinely involving sight necessarily required sight and therefore none of us sought alternative methods for me to do those jobs. This practice led me to the conclusion that I could function competitively only by means of my little remaining vision. The belief persisted that to see was to be competent and to not see was to be incompetent. My fear of being less capable prevented me from learning braille, the very skill which would have enabled me to function on a par with my sighted peers. Many children today are pressed to read print long past the point where reason would govern that it is no longer functional. I believe there exists a prejudice against braille and as with most prejudice it is not deliberately intended or for that matter even recognized by those who feel it most deeply." End of quote.

The attitudes of teachers are also important. If a teacher says that John can still read print but Bill has to use braille, what negative feelings that conveys. If a teacher does not know braille or only has braille code information without knowledge of the various ways to teach reading and writing in braille, or is without a firm belief that braille is the best tool for some school work, then how can her student develop positive attitudes?

Part of the problem is the dichotomy. Print and braille don't have to be mutually exclusive. It does not always have to be either, or. It is not necessarily print or braille (or tape or voice).

In Brantford we have several students who use all media. For example, some use braille for notes, voice for computer, tape or scanner for fiction reading, print for math, or whatever suits individual needs. Here is another point to consider. Floyd Cargill tells of a survey that was conducted in his state. Fifteen years after their graduation, one half of the students who had a little useful vision in school, were now totally blind. Those who had been allowed to use both print and braille in school were much better prepared for their future.

The third reason for not using braille implies another dichotomy. Improved technological systems of communication and increased use of audio tape and voice output devices are marvelous additions to our technological age. They help close the information gap which exists between availability of information for the blind and sighted. They can do many things better than braille. They do not totally replace braille, they enhance it. However, they do cause us to shift our emphasis on the way we use braille. Braille is no longer the best way to do all school work, but it is still the best way for some.

Reasons 4 and 5 also intertwine. I cannot comment on these in Alberta but would suggest if lack of choice in educational service delivery systems is present and if some teachers are inadequately trained then steps should be taken to improve those situations. Here again we meet another dichotomy. Why should there be only two courses in all of Canada for teachers of the blind and visually impaired? Why should teachers have to leave families to attend these courses? Couldn't correspondence courses, audio tapes and video tapes be used for at least part of the training?

If you are a parent, do you have a choice where your child is educated? Is the program adjusted to fit the individual needs of your child or does your child have to fit the program?

We'll move on now to reason 9 for not using braille - complexities of the contracted braille code. Immersed in this problem are the slow learners, the elderly and the learning disabled from reasons 6, 7, and 8.

Susan Spungin from the American Foundation of the Blind has prepared a paper "Braille Literacy - Issues for Consumers and Providers" I quote her.

"A recent rash of articles has attributed the illiteracy of blind persons to the complexity of the braille code. Let's not revert to the belief that the braille code is archaic or too complex. No research has supported the notion that the braille code, in and of itself, causes illiteracy among blind students." End of quote.

On the one hand Susan is right. For some blind people contracted braille has opened doors to education, literature and employment. On the other hand she is wrong. There IS research which does support the notion that contracted

braille does cause literacy problems among some blind students and for them contractions close the doors to education, literature and employment.

Again another dichotomy. It should not be contracted Grade Two Braille OR alphabetic Grade One Braille. We should have both available for use. People must be allowed to use whichever is best for the individual. How do we know what is best?

Over the past 15 years I have conducted research comparing writing and reading in contracted braille with writing and reading in alphabetic braille.

Since some of you may not understand the difference between these codes I shall explain. Grade One Braille, which is also called alphabetic braille, closely follows print using letter-for-letter correspondence. One print letter represented by one braille letter. Grade Two Braille or contracted braille uses many abbreviations and short forms.

I cannot cover all the 15 years of research, but I will mention the highlights and tell you the results. If you have questions, keep them in mind and I'll be glad to answer them at the end of the talk.

Years ago I was astonished to find that no one had ever done research to see if it was better for beginning primary children to start with alphabetic or contracted braille. It was just assumed contracted was better.

We wanted to find out if teaching beginning primary students to read in alphabetic braille would be detrimental to anyone. Since we had already determined that those with difficulties did better in alphabetic braille, this study included 14 children of above average ability. They were divided into 2 groups matched for age, intelligence and school setting. At the end of each year their progress was tested in spelling, phonics, reading vocabulary, reading stories and reading speed. After 2 years of using alphabetic braille the one group then switched to contracted braille. The other group always used contracted braille. The students who learned to read and write using alphabetic braille scored significantly higher in all areas and they have maintained their superiority even after changing over to contracted braille. We now begin all students with alphabetic braille and only some learn contracted.

The teachers who used the alphabetic braille were all pleased with the results. They felt that many of the best things could not be measured by tests. There was good indication of individual learning styles. Each child could use his individual strong points. There was lack of reversal problems. The children could write with more independence. The print and braille students could do the same things. The children could read to themselves or to a friend. Word games could be played. It encouraged thinking rather than memorization and it was great fun.

Some teachers have now tried it with Primary children in integrated programs. They found the children could spend more time with their classmates when using alphabetic braille. The classroom teacher was able to help because she

could learn it quickly. Parents were able to help because they could learn it quickly. The child was able to help his sighted classmates.

Another study involved 20 older students who were having problems with contracted braille and after several years of using it decided to switch to alphabetic braille. Much more progress was made in all areas by all participants when using alphabetic braille.

When some of these students returned to contracted braille their progress again slowed but the ones who continued to use alphabetic braille showed greater progress.

Another study involved 125 people who had always used contracted braille. Reading and writing contracted braille was compared to reading and writing alphabetic braille. Time, errors and comprehension were compared. Overall 113 participants performed better with alphabetic braille, 11 performed better with contracted braille. The greatest gaps between performance in contracted and alphabetic braille were obtained by those with learning disabilities.

I mentioned earlier students using both print and braille. This works better if alphabetic braille is used. The same information enters the brain from two different but similar media. The two media reinforce each other. After learning alphabetic braille 9 out of 10 students will then choose to do the majority of their work in braille. This is NOT true for contracted braille. It is difficult for most students to use both print and contracted braille because different information enters the brain from each medium and they do not reinforce each other.

What a great solution for a multitude of literacy problems alphabetic braille can be.

At the beginning of my talk I mentioned the publication "Literacy - An Issue for Blind and Visually Impaired Canadians". The recommendations concerning braille came from submissions and presentations. Some of these recommendations emphasize the things we have just discussed. If you want a copy of the full report, Edmonton CNIB has one and can get more from National Office.

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## **Some Recommendations of the Advisory Committee**

Funding and resources should be secured to adapt literacy materials in Grade One Braille and large print.

Specific findings and recommendations regarding braille literacy should be forwarded to the Canadian Braille Authority to encourage them to advocate and promote the use of Grade One Braille and Grade Two Braille.

A greater number of Grade One Braille and Grade Two Braille books and materials, with appropriate catalogues, should be transcribed and acquired by the CNIB National Library.

Programs to address conceptual development and other special needs of pre-school blind and visually impaired children should be implemented across the country.

More story books for pre-school children should be transcribed in Grade One Braille.

Braille instruction for children should begin with Grade One Braille.

In conclusion, Let's build positive attitudes.

Let's support our teachers.

Let's use modern technology.

Let's encourage the use of alphabetic braille where it is appropriate.

Let's go to where the puck is going to be and the literacy issues for blind and visually impaired. Canadians will be well met.

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### III

## BITS AND BITES

### Preschool

1. Some interesting books for preschool and beginning readers include cloth, zippers, buttons, magnets, velcro action figures, pockets, etc. as well as books of different shapes.
2. Good early experience with alphabetic braille will give the child a more positive healthy attitude toward braille and he will begin to understand that names of objects can be written and read as well as said and heard.
3. Preschool programs should encourage awareness and concentration while fostering experience and language.
4. Babies need alphabetic braille books just as much as they need songs, daughter, toys, games and affection. These activities encourage and stimulate their development.
5. A child must be allowed to keep his delight, his wonder, his ability for make believe and his absorption in the world while learning skills and self-discipline.
6. The more things we can give children to do, to handle, to explore and to work with, the greater the chance that they will get ideas. Then we may be able to help them turn ideas into symbols and words.
7. Repetitive songs like Old Macdonald get the child to listen to sequences and strengthen language process.
8. A blind child must be part of the action of moving objects from place to place in order to understand that an object is the same object no matter where it is.
9. To help promote literacy among families, the importance of early literacy development needs to be explained and parents with low literacy skills need information on literacy resources and programs.
10. When you describe objects child is examining, use words that have meaning because of touch, smell, taste or sound.
11. Read to your children because when you hold them and give them this attention, they know you love them.
12. Read to your children because children's books today are so good that they are fun for adults too.

13. Read to your children because until they learn to read themselves, they will think you are magic.

14. Read to your children because reading to them will encourage them to become readers.

15. Many times you will need to use a hands-on method for supporting your baby's movements and physically showing him how to investigate. This develops trust, alleviates fear, builds confidence and encourages more exploration.

16. The blind child needs purposeful lessons in cause and effect because of his inability to observe the results of most actions.

17. Parents of blind children may borrow print books with many helpful ideas from the Sherman Swift Reference Library at the CNIB Library for the Blind in Toronto.

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## **Primary Grades**

1. It is important to develop a strong favourable attitude early because this will determine the child's future interest in school oriented activities.

2. It is important to read aloud to children and to talk to them about meaningful experiences because children must recognize and understand words by ear before they recognize them by touch.

3. It is important that young children understand that anything one says can be written down using our alphabet and that a person who knows how to read can tell what others have said without hearing them.

4. Children in primary grades need to do a lot of oral reading so that patterns are reinforced in the brain through hearing, speaking, movement and touch.

5. Ask questions before reading rather than after reading e.g. Let's find out how old the captain is. Where does Susan go?

6. There is variety of preferred stage for phonics introduction. Some prefer to wait until child has a vocab of 50 or more words. Some prefer to begin with phonics. Some prefer exposure to literature and then deal with problems as they arrive. All work if handled well.

7. Small shape discrimination and orientation are more important readiness skills than size and texture discrimination.

8. When using phonics, blend first consonant in word to vowel sound. Emphasize words that begin the same.

9. To ensure that reading of first books is successful, many teachers prefer to read letters, words, phrases and short stories on paper before introducing books.
10. Young children are not taught braille or print. They are taught to write and read by means of braille or print.
11. In nearly all cases regular sized alphabetic braille is better than jumbo braille.
12. Most early braille reading words should be open without too many letters with 4 or more dots. Use words with a, b, c, k, l, and i as well as l, m, o, s, and u. Avoid early words with too many r, t, n, z, q and w.
13. The learning value of primary workbooks in braille is extremely low. Far better to spend time in more valuable and meaningful activities than struggling with seat-work pages.
14. The use of music can assist the acquiring of reading skills with the use of rhythm, patterns, listening, songs and singing games.
15. Oral reading contributes more to reading growth than all the exercises ever conceived.
16. Some may concentrate so hard on teaching children how to read using braille that they forget to teach them to want to read.
17. Learning to read braille involves tremendous physical and mental strain. Physical activity breaks as well as quiet times are needed often to avoid pressure on the neuro-muscular system and disorganization of mental processes.
18. If in early exposure to braille there is fatigue, discomfort, discouragement and/or lack of meaning, this may produce prejudice against braille for life.
19. Predicting the whole from its parts is often a problem. Braille users, who must do that to read, need direct training in integrating elements into a total pattern.
20. Forget squares, circles and triangles and spend time learning letters.
21. Learning to read should be a thinking and not just a memorizing process. Help the child to clarify and express ideas he has formulated himself to promote intellectual growth.
22. If we believe that enjoying childhood is important, then there is never any homework in primary grades.

23. Writing is more fun if someone makes a fuss over it. It is important to put down the creative efforts of young children before they can write it themselves.

24. There are some advantages to books without pictures. Pictures often distract attention away from words and can cause confusion because they elicit too many meanings.

25. Using alphabetic braille limits the number of shapes and reduces the opportunities for confusion. It increases the frequency of exposure and lessens the recognition task so that details making up the letters and words become familiar.

26. Children need a calm and positive environment.

27. The child must learn that meaningful spoken words are made up of non-meaningful sounds which are connected in a specific sequence.

28. When a child is writing on a braille, the table should be low enough so that the child will press down rather than pull down keys. Some children prefer to stand.

29. When using a braille, keep fingers on keys, push all keys needed for letter simultaneously, use thumb for spacing and always use correct fingering.

30. Remember children need both creative writing and braille letter drill. Drill exercises should be done in rhythm to clapping or tapping while children say out loud what they are writing.

31. Learn the habit of pushing line spacer key before returning carriage level to avoid writing over lines or rubbing tops off dots.

32. When first learning to put paper in braille, move carriage to right and practice with a smaller stiffer paper.

33. Learn five steps for putting paper into braille. First check knobs on side to make sure they are rolled as far as possible away from person writing so that bottom of paper will be clamped in properly. Then lift the side levers. Thirdly, put paper tight across under metal roller with left side under edge. Next lower side levers and roll side knobs toward person until paper stops. Always press line spacer button once before starting to ensure first line is in proper groove. Make sure carriage lever is at left and you're ready to go.

34. All children learn best from manipulating and exploring objects. Blind children need learning environments where this is uppermost.

35. It is useful in primary years for students to keep some of their work in binders. This helps prepare for organization which is needed in later years.

36. If items in classroom have braille labels. use similar labels on map of classroom.
37. When introducing spelling, some teachers have found success in this approach. "Our word is crash. A sentence using crash is 'I heard a crash.' Crash is spelled c-r-a-s-h. This is how I write crash, c-r-a-s-h. Now you look at what I have written, crash, c-r-a-s-h. Now you look at the word and spell it aloud. Let's spell it together. Now you write crash."
38. The majority of students require the support of knowledgeable teacher who will help them see patterns, generalizations and exceptions in spelling words.
39. After the child has basic language competency then phonological awareness develops. Alphabetic principles and sound-symbol correspondence are the same whether a visual code or a tactual code is used. Next comes word recognition and the use of context which leads to competent reading.

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### **Elementary Grades**

1. Written comprehension questions should be avoided until at least fifth or sixth grade level.
2. There should still be much oral reading at this level.
3. Technical skills for braille reading continue to develop into teen years.
4. When teaching writing using a slate and styles, it is best to teach letters which use only corner dots first a, c, k, m, u, x. The last ones to teach would be those with an isolated single dot in the centre e, i, o, j, r, w and h.
5. Tactile discrimination continues to improve in elementary years and then usually levels off.
6. Children should experience at least three books at the same time including the one the teacher is reading to the class, the one the child is reading in class and a free choice book which means choice of book and choice of medium.
7. Non-growth periods are a time for children to master what their brain development permits them to do rather than fail at things they can't do yet.
8. Children with similar problems are remarkably successful in learning from one another and in aiding each other in their learning.
9. In storytelling for blind children the voice is instrumental to convey mood and tone.

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## Secondary School

1. For teens and adults learning braille, their first books could be children's literature which is enjoyed by older people because of its humour, human interest and interesting story line. The repetition and simpler vocabulary make them easier to read.
2. When introducing a certain punctuation mark or composition sign, read a short passage without it and then reread same passage with new item added.
3. When ready for a first novel a good choice is a children's classic which is also enjoyed by adults.
4. Some people prefer a list of problem words before they read a passage while others don't. Let student choose.
5. Make sure table is high enough for knees to fit under but low enough for comfortable reading. Experiment with different heights and with different angles of slant for books and papers.
6. As they progress through school, all braille readers, especially poorer readers, should have less emphasis on braille and more emphasis on listening.
7. There is a great variety of techniques among skilled readers and the same variety of techniques among poorer readers.
8. When filing cards in braille they should be arranged upside-down starting alphabetically from the back of the drawer. This makes it easier to locate item.
9. Every student is responsible for teaching as well as learning and for exercising self-discipline.
10. Some students who wanted to learn braille and were told they didn't need it, resent how they were treated now they are adults who no longer can read print.
11. Parenting courses given in high school should include discussion of literacy issues including how language develops in young children.
12. Schools should offer courses in the study of children's literature and acknowledge the value of teenagers reading to young children.
13. Acceptance of the benefits of learning braille is much easier if you are among peers who use braille.
14. You do not need fancy equipment to teach braille reading and writing. You need patience, flexibility, sense of humour and usually hard work.

15. It is essential for a blind student to learn to make efficient notes from an oral presentation. In higher education most information is received from lectures, readers, tapes and computer voice.

16. Sighted children have at their disposal unlimited resources in print and picture on any topic they choose. When blind students are doing research or a project, they need assistance because very little is available in braille and concrete materials.

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## **Adult**

1. Acceptance in a warm supportive understanding atmosphere, success from easy and short steps, structure, interest and practice are all essential elements in a program for adult literacy.

2. Some congenitally blind adults who come to literacy centres do not understand how words are put together or how to split words into syllables or how to determine the sound of a group of letters.

3. For a failure oriented child or adult, reading a silly story with outrageous characters can cause them to enjoy being smarter than someone so clueless.

4. When a slow reader has finished reading a sentence, it is wise for a teacher to repeat the sentence so that the student can get the meaning.

5. Repeated readings of the same passage may help.

6. The expectation of failure is part of a vicious circle. We cannot totally eliminate failure because it is part of life but we can eliminate defeat, hopelessness and despair by building confidence and self-respect. You do that by developing students as well as skills.

7. If teacher reads first part of page or book while student follows, then completing it on their own is easier.

8. Where opportunities for failure and bewilderment are limited, there is less need for incentives because the work of itself can be rewarding and success in it a major satisfaction.

9. For some older folk learning braille is similar to learning morse code. First you must learn letters, then word patterns and then phrases.

10. People blinded later in life need to have assistive gadgets and practice to keep their script writing legible.

11. A person who has recently lost their sight may have a double strain on nerves when reading. Strain from using fingers for a new task and strain from eyes because the neural and muscular habits of reading with the eyes are so well formed that they continue to function.

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## **Learning Disabilities**

1. One of the greatest obstacles is getting administrators, teachers and parents to understand that many blind children also have learning disabilities.
  2. It is difficult to compensate if more than one area has problems.
  3. The learning disabled not only do not outgrow their problems but they fail to keep up the normal rate of growth in many processes relevant to writing and reading.
  4. Usually nerve pathways, through use, become insulated from interference of other pathways but sometimes they do not.
  5. If students with learning disabilities are presented with a task that presents too many problems simultaneously, they must rely on rote memory because they don't know what to do to clear all the difficulties. When too great a grain is put on the memory, they have no other means of solving similar problems.
  6. For variety in reading techniques for the learning disabled include imitative reading, repeated readings, radio reading, chunking in phrases and clauses and paired reading with teacher or another student.
  7. In blindness we are dealing with the deprivation of some information. In learning disabilities we are dealing with the inability to utilize the limited information that is still available.
  8. When there is a multiple involvement of both a sensory impairment and a learning disability, we must try to ascertain the contribution of each.
  9. Students with learning disabilities need to manipulate materials. They need to rotate items and to physically move parts.
  10. Being told what to look for before stimulus is presented will help speed and accuracy of focus. One way of enhancing selective attention is to make it easier for the child to attend to critical features.
  11. For the child with learning disabilities, homework and independent work must be reduced to a minimum, because the teacher must have control over presentation and child's response to it.
  12. When it is explained to a person that he has a learning problem which may be helped by special ways, a great weight is lifted from his shoulders.
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## **General**

1. Some teach reading first, some teach writing first, some teach both simultaneously. Choose what is best for the individual child in his setting.
2. Try to achieve good movement across words remembering to allow for individuals who cannot achieve this.
3. When students of any age are beginning braille double space between words, space between lines, use no punctuation marks or composition signs, start each sentence on a new line and use simple and repetitive vocabulary. Use alphabetic braille.
4. Very few braille readers can process information from other fingers. In most cases it is best to use just index finger.
5. many braille readers can process information from only one hand. Encourage use to two hands but if student prefers just one, then allow that.
6. To familiarize student who is just learning braille with context, it is often helpful if teacher reads while student follows. The teacher reads again while student follows and finally the student tries to read the paragraph independently.
7. Another way to help beginner is to read familiar material such as a poem or song just a phrase at a time.
8. Tape loose papers to table so that they do not slide around.
9. All ages like to read about themselves.
10. Finger dexterity and light touch are helpful when reading braille.
11. Braille reading is a process of the brain. It involves memory data, verbal code and tactile symbols.
12. Braille reading uses all three stages of memory. The sensory register has infinite capacity but information is gone in a second or two. The short term memory manipulates, compares, discards and records. The long term memory provides constant feedback.
13. Most fingers are sensitive to movement which is why some people scrub over letters when learning to read. For some people using the finger sideways produces clearer images and those people should be encouraged to read moving finger that way.
14. Reading with two hands is faster for an individual only if there is instantaneous coordination of information and if there is relaxed ability to use hands independently.

15. Every teacher of a braille using student should learn to read braille with her fingers.

16. It is essential to learn to suspend judgement until all the necessary information is available. A word cannot be read accurately when only the first two letters are read. Because braille readers can touch only one letter at a time, they cannot tell if ba is bâ as in bat, b as in bake or bô as in ball until they have checked all the letters. The reader may or may not be able to use context clues to help determine word.

17. Supplement slower braille reading by tapes and by oral reading of good literature by teachers and parents.

18. Make only very limited use of books which are spin-offs of T.V. If the school doesn't use good literature, many students will never meet it.

19. Go slowly with only a little new material at a time. Learn each step thoroughly before proceeding to the next.

20. Braille reading involves far more than tactile discrimination. It involves nearly all brain functions sensory, motor, memory, cognition, attention, expectation as well as motivation.

21. In braille, the time required to recognize a whole word is greater than the sum of time needed to recognize the parts. In print it takes less time.

22. Multiple choice questions penalize the braille user because it is much more difficult to scan and compare.

23. Braille reading needs movement. Print reading needs pauses.

24. In the alphabet letters, dot one appears 21 times, dot six appears six times and all the others appear between thirteen and fifteen times.

25. If poorer readers are required to use braille as their predominant educational method, it will be an additional educational handicap. Information gathering capacity should be supplemented by a variety of auditory materials.

26. To meet the individual needs of a blind child both specially created materials and appropriately adapted materials are needed.

27. We learn to write by writing and to read by reading.

28. Braille reading is a digestive process of the mind done with the aid of fingers not by them.

29. Creative writing is an area where the blind can compete with anyone.

30. Results of experiments show that in right handed people the left hand showed superior tactile skill, the left hand showed better skill in recognizing shapes and fewer errors are made by the left hand in typing.

31. In English there is not a single one of the 35 phonemes (sounds) of the language which is represented by just one spelling. Some sounds have 13 different spellings. As well, letters or combinations of letters are used to spell as many as 7 distinct phonemes.

32. The more dots a letter contains, the longer a person examines it, the less likely he responds correctly and the less likely he'll remember the name.

33. In contracted braille the greatest problem is accurate recognition of the individual cell because of all the complexities and meanings in it. However, braille by nature must depend on recognition of the individual cell rather than the surrounding information in words, phrases and sentences.

34. With alphabetic braille the learner is active in the learning process. Thinking skills are developed because he determines words himself.

35. With alphabetic braille, a recognition error in a symbol changes only one letter in a word and the learner can usually self-correct. With contracted braille a recognition error in a symbol may change a whole word or part of a word and the learner usually needs assistance to correct.

36. It is sometimes necessary to encourage and allow a delayed graduation from any step in schooling. An extra year in primary, elementary and/or high school may be beneficial for the braille user.

37. Before you can read to learn you must learn to read.

38. Perhaps some children have problems with reading because adults have failed to let their excitement and wonder show. Children need to hear adults laugh and cry when they are reading. Sometimes finishing a good book is more important than getting a good sleep.

39. Learning to tell others about a wonderful story you have read is a communication skill that will come in handy right into old age.

40. You do not make a dog happy by wagging its tail.

41. Instead of bemoaning the passing of young readers let us celebrate their continuing vital presence among us.

42. 8 dot braille is based on alphabetic

43. A foot control for a tape recorder leaves hands free for other tasks.

44. If the use of visual aids is pushed to the extreme, the results can be disastrous. If visual aids are seen in the proper context and used within reason, they can be positive.

45. With current advancements in computer technology, the simultaneous publication of print and braille materials is a reasonable goal. Incentives should be given to publishers to provide braille materials at the same time that print versions are made available for print using school age students.

46. In tactual development stages, awareness of tactual qualities of familiar objects is usually followed by shape recognition. Real objects are followed by smaller models and 3-D then 2-D tactiles. The final stage is symbol use.

47. Just as there are visual illusions, there are tactile illusions. Letters which are close together feel smaller than the same letters surrounded by space.

48. To help students understand an outline shape, place object or raised shape inside dotted shape.

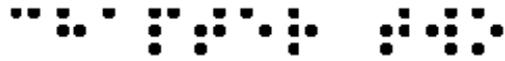
49. When a person is reading silently, only the fingers are supplying information and stimulation to the brain. When a person is reading orally, the lips, the tongue, the vocal chords and the ears, as well as the fingers, are supplying information to the brain. Oral reading is better for learning.

50. When a person is writing braille, if they say aloud what they are writing as they write it, the lips, the tongue, the vocal chords and the ears, as well as the fingers, are supplying information and stimulation to the brain. Until writing becomes automatic this is good for learning.

51. When students are tested in braille reading, writing and spelling, five factors emerge which differentiate the primary programs of those with high achievement from the primary programs of those with lower results. These five items produce better braille literacy:

1. language program based on meaningful experiences and activities
  2. lots of oral reading
  3. a sequential phonics program beyond basics
  4. no workbook, seat work or written comprehension questions
  5. begin with alphabetic braille
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## CHAPTER TWO



# LITERACY ACTIVITIES FOR PRESCHOOL YEARS

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### Preschool Years

Most sighted children have had exposure to books before their first birthday. By the time they enter school many literacy concepts are familiar to them.

1. enjoying stories and books read by others
2. using pictures to add to enjoyment
3. pretending to read from books
4. becoming familiar with letters and symbols
5. playing with paper and pencil and writing name
6. some understanding that letters make sounds and sounds make words
7. grasping the idea that those black squiggly lines are words that can be read
8. reciting alphabet and recognizing that each letter name has a symbol

However, the blind child misses many of these preschool concepts. The underlying reason is contracted braille. The person usually responsible for providing the opportunity for the blind child to have these experiences is the busy mother. Let's not deal with unrealistic fantasies. Most young mothers of blind children cannot learn contracted braille when the child is young. However, they can get a basic understanding of the braille alphabet - which is all they need for several years. Books for young children can be easily produced in alphabetic braille. They can provide the child with all the enjoyment and most of the concepts that preschool sighted children receive.

Alphabetic braille is also the answer for fathers, grandparents, siblings, friends, day care workers and others. The child receives positive encouragement about braille instead of overhearing adults talking about a difficult and frustrating code that makes even the older folk feel inadequate.

Many of the following suggestions for preschool books may seem radical. Keep in mind the purpose of reading to preschool children and remember who will be doing the reading.

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## **Preschool Braille Books**

1. Use alphabetic braille

2. Use only letters and numbers with number sign

- no punctuation
- no italics
- no letter sign
- no capitals
- no explanation of pictures

3. Use regular sized braille - not jumbo

4. Use real objects and textures and only limited use of tactiles. Use taped sounds, sound effects buttons and real sounds where appropriate. Books can be kept in book baskets. In the basket is the book plus objects, textures, sound tapes etc., that enhance the story. Sometimes a small object or texture can be placed on the cover of the book and/or the outside of the basket for identification by the child.

5. There are different types of preschool braille books.

5.1 A braille book with a blank line left between each braille line. This is a braille book first (giving braille added importance). The print letters can be placed exactly above the corresponding braille letter. These books are very popular with blind children.

5.2 A print book with braille added. Clear plastic sheets with braille written on them can be inserted between print pages or brailleable (clear adhesive plastic) with braille embossed on it can be stuck to print pages. These books are popular with sighted adults and children but not as popular with blind children.

6. Choosing books to be brailled. There are several things to consider when choosing a braille book for a preschool blind child.

6.1 Is the story a good one for story telling? Would the story be a good one if it was told without the book and without pictures? Could the story be understood without extra verbal explanation? Fairy tales and nursery rhymes were told for generations before they were written down. Robert Munsch tells his stories

many times before he writes them down. That is one reason why blind children love his stories.

6.2 Does the story have words which describe sounds, touch, taste and smell? Do not choose books where visual descriptions are important to the story. Avoid stories where colour is important or where visual concepts of clouds, landscapes or other large spacial items are essential to the understanding of the story. For the young blind children to enjoy stories they need to be meaningful to them. It is important to make sure that early language is connected with experience. There is lots of time in later years to use language to learn about the world. At the preschool level we are concerned with using real objects and experiences to make language meaningful. Combining 6.1 and 6.2 means that fairy tales, nursery rhymes and Robert Munsch stories which have descriptions of sound, smell, taste and/or touch are doubly great.

6.3 Is the book a good book for all preschool children? Does it deal with the child's world - sleeping, eating, playing, etc? Is it funny? Kids love and need humour. Is it predictable with some repetition? Along with longer story books include some books with only one word or just a few words on a page with a meaningful object, texture, tactile or scratch and sniff sticker. Combining 6.1 and 6.2 and 6.3 means that fairy tales, nursery rhymes and Robert Munsch stories which have descriptions of sound, smell, taste and/or touch and contain humour, predictability and meaningful childhood experiences are marvelous books for blind children.

Since many people want to know what picture books have the above qualities, a list has been prepared. This list is not a complete list. Everyone will have books which meet the above criteria and which are favourites and are not on the list. The problem was not in finding books for the list but in choosing which books to keep on it. Books were included if they were easily available and if publishers indicated that if they received a request they would be willing to give copyright permission for the book to be transcribed into braille.

One of the reasons for publishing this book in a binder format was to allow the opportunity and room for each person to insert pages and add other favourites to the list.

There are many other books written for parents of preschool children with good suggestions of activities in many other areas of development. These activities are important for the child. In this book we are just adding some new ideas on how literature and language can be made more meaningful. Ideas which will lead the child to better braille literacy and the enjoyment and knowledge that come with it. If you have a preschool blind child be sure to get assistance in other areas of development for your child. Other areas of development also affect literacy.

A very important area for meaningful language development is perceptual-motor activities. The best outline I have seen for this was written by a

colleague Mrs. Jan Nemeth. She has granted permission for it to be included here.

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**PERCEPTUAL-MOTOR ACTIVITIES**  
**for**  
**VISUALLY HANDICAPPED CHILDREN**  
**including those who are**  
**MULTIHANDICAPPED**

This program of perceptual-motor activities for the young visually impaired and multihandicapped includes an outline of suggested general performance areas, various objectives, examples of teaching the objectives, uses of equipment, simple games of low organization and ideas to motivate general locomotion.

The major goal of the program is to develop and improve perceptual-motor skills through a variety of locomotor, movement, and simple game experiences. An increase in basic skills of movement, and simple game experiences. An increase in basic skills of movement, organic fitness and an improvement in social and emotional development will be evident.

Additional goals of such a program are as follows:

- 1) to increase the enjoyment of moving
- 2) to develop skills already gained and introduce new ones
- 3) to increase mobility skills
- 4) to improve body awareness
- 5) to learn basic spatial concepts
- 6) to improve the child's own feelings about self through hard work and success (increase confidence)
- 7) to improve coordination and ease of movement
- 8) to involve all children in physical activity
- 9) to coordinate movement and auditory clues
- 10) to give personal meaning to language

Traditional physical education programs have usually provided children with a few isolated skills which have been useful only in recreational and game situations. The need for the young visually impaired and multi-handicapped to experience daily perceptual-motor activities generates the necessity to devise artificial means to provide a variety of movement experiences that are absent in their lifestyle. Movement education should play an important part in their physical education program.

The curriculum must be well rounded and include 3 major areas of perceptual-motor development.

- 1) Fundamental locomotor movements
- 2) Movement exploration
- 3) Games of low organization

These areas stress the use of perceptual information in the performance of the motor acts involved and in certain cases overlap. These areas will be discussed briefly and additional supplementary teaching suggestions and ideas will be included.

Fundamental locomotor movements help the child develop the ability to move efficiently in space. Speed, agility, control of balance, endurance, muscle strength and total body coordination are all practised. These skills include running, walking, skipping, hopping, jumping, etc., and such exercises can include variations in force, time and space. Combinations of these skills are also beneficial. There are numerous locomotor activities and experiences which young visually impaired and multihandicapped children can experience. Through creative programming these movements can be a part of every lesson as a daily warm up activity. Once the child can attend and perform to the instructor's voice, single instrumental sounds can be introduced for motivation and later rhythm records can be used. Various locomotor combinations can be practised and made fun. In order to build endurance, short periods of stability and body awareness exercises can be interspaced between periods of continuous locomotor movement. The activities that follow are useful for total body movement and can be part of a daily warm up routine. Note that they are NOT listed in increasing order of difficulty.

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## **Introductory Warm Up Activities Involving Locomotor Skills**

- 1) walk - with/without beat
- 2) walk - forward, backward, sideways, tip-toe, big steps, toes in/out heel walk
- 3) walk - up/down an incline board
- 4) walk - to fast/slow beat
- 5) run - straight path
- 6) run - forward, backward, sideways
- 7) run on toes
- 8) run - toward, away
- 9) run - taking large steps
- 10) run - fast/slow
- 11) jump - off floor using 2 feet (vertical)
- 12) jump - jump - horizontally
- 13) jump - forward, backward, sideways
- 14) jump - for various heights
- 15) jump - over obstacles (ropes, beanbags)
- 16) jump - for height and/or distance
- 17) jump - inside/outside hoop
- 18) hop-on one foot - dominant/non-dominant
- 19) hop - to left/right, forward/backward/sideways
- 20) hop - over/around object
- 21) leap - with right/left foot take off
- 22) leap - for distance/height
- 23) leap - over obstacles
- 24) run and jump/leap

- 25) slide to left/right
- 26) slide forward (gallop)
- 27) alternate leading foot while galloping
- 28) skip (step and hop) for distance/direction
- 29) walk - alternate with run on cue
- 30) walk - and on cue lift one leg up (balance)
- 31) twirl (turn body around)
- 32) interpret sounds of a drum, triangle or tambourine through movement
- 33) demonstrate the actions of objects or animals
- 34) march
- 35) demonstrate various combinations of locomotor skills on cue
- 36) run and on cue sit down
- 37) walk or run to music, when it stops sit down
- 38) do locomotor skills to beat and on cue stop and touch specified body parts
- 39) locomotor skills to beat and on cue stop and touch specified body parts
- 40) musical hoops - walk around, when music stops find a hoop and sit inside (gradually reduce number of hoops available)
- 41) musical chairs
- 42) swing only arms/move only legs to rhythm
- 43) do locomotor skills to simple beat and on cue hide specified body part with hands
- 44) slap body parts to music (instructor calls out specific body parts)
- 45) run and on cue get whole body in air
- 46) crawl like a puppy dog
- 47) run and on cue touch floor/wall with/without specific body part
- 48) run anywhere - what part if touching the floor, now use another part

- 49) explore different ways of travelling with hands and feet on the floor
- 50) tails - attach with tape a kleenex on back, run and don't let anyone catch your tail
- 51) run and on cue freeze, perhaps make a statue (happy, sad, scary, etc.)
- 52) pretend to skate on the floor (do twirls, and leaps)
- 53) ticker tape - hold in one/two hands and move with it, let it fly in the air

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**The following records are useful:**

Bowmar Rhythm Records - Rhythm Time #1 - Rhythm Time #2

Movin' - Hap Palmer

Mod Marches - Hap Palmer

Bert Kempfert Music - That Happy Feeling

By nature, movement experiences found in regular physical educational programs are perceptual-motor activities but the emphasis is generally on the gross motor development and not the perceptual development through the medium of movement.

Movement is the foundation upon which all educational experiences are built. (Piaget, Delacato, Frostig, Kephart, Getman) Through movement a young visually impaired and multihandicapped child can improve health, gain an understanding and control of the body, develop a better understanding of self and others and respond to challenges at his own level. Activities should be selected on the basis of how well the student can develop concepts and movement principles described under the following headings: body awareness; awareness of environment; awareness of body postures; and body control.

With the visually impaired and multihandicapped, the teacher occasionally must provide solutions to movement problems or provide physical assistance to move correctly. Within time, these movements and solutions to the movement problems may become more natural to the child. Activities can be initiated without equipment and later explored and reinforced by use of equipment. (As an example, a child can be told to walk and on cue touch a specified body part with his hand. Once this has been accomplished, to reinforce or motivate the same activity, the child can be encouraged to use a bean bag and make it touch various specified body parts.) Learning body surfaces can be done first by using the floor and later moving along a bench using the front or back of the body.

A wide variety of equipment should be used whenever possible. The following list suggests some basic equipment.

- playground balls (large/small)
- parachute
- spongeballs
- ropes
- hoops
- scooters
- scoops
- benches
- beach balls
- mats
- chairs
- large push ball
- tires roll mat
- yard sticks
- push doughnut
- adapted walking board
- balloons
- bells rockers (various sizes)
- drums
- kleenex
- tambourine
- crepe paper
- triangle Javex bottles (for bowling pins, scoops, etc)
- bats
- cardboard boxes
- inner tubes
- broomsticks or hockey sticks
- barrels skates (roller/ice)
- wooden climbing boxes
- trampoline
- horizontal ladder
- climber
- large gymnastic mat

Some useful teaching units in movement exploration which can help a child discover

how his body moves in space and in time are as follows:

(unit headings and many more are available from Vanier (1))

---

## **Body Parts**

head back heels

neck elbow ankles

shoulders wrist shins

chest fingers knees

waist thumb thighs

stomach hands arms

hips toes feet

legs seat or "bum"

- 1) pretend to take a bath, child or teacher suggest a body part to be rubbed
- 2) hoops, place certain body part inside on request
- 3) explore different action that certain body parts can do, then suggest which body parts must move when dancing to music
- 4) slap body part to music - teacher calls out specific part to be slapped or tapped (can be done using body actions)
- 5) roll ball with different body parts
- 6) lift certain body part on request and shake (eg. shake shoe off foot)

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## **Body Surfaces**

front

back

sides

- 1) slide along the wall using different surfaces, also floor
- 2) do a log roll on floor verbalizing surfaces
- 3) use equipment such as bench or scooter and experience moving
- 4) partner work - feel partner's surfaces, roll partner along floor

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## **Body Shapes**

curved

straight and narrow

straight and wide

twisted

- 1) feel a hoop and make body curl inside it
- 2) put bean bag behind body and "glue" feet on floor, turn and pick it up
- 3) hold a flag, ticker tape etc. and practice swaying it from side to side, twisting body

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## **Body Relationships:** body part to body part

near to each other

far from each other

rotate with one part fixed

- 1) bending and unbending various body parts
- 2) practice curling, stretching and twisting body in air/floor, on mat

---

## **Relationship of Body Parts to Objects: on, off, over, around, across, under, near to, far from**

- 1) bench work, go under feet first, etc. and various combinations
  - 2) hide legs under parachute, etc. (use walls, floors, boxes, etc. as objects)
-

## **Controlling Body: total body rotations: static balances; dynamic balances**

- 1) various log, forward and backward rolls
  - 2) exercises outlined in exercise section
  - 3) trampoline work
  - 4) climber work
- 

## **Manipulating**

Refer to section "Suggested Uses for Equipment"

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## **Relationship of One Person to Another of Others**

near to side by side

far from shadowing

meeting mirroring

parting leading

facing following

- 1) with partner touch specified body parts together eg. head to head, back to back, hands to hands, etc.
- 

## **The Transfer of Weight**

step-like actions

rocking

rolling

sliding

flight

- 1) running and leaping

- 2) put a bean bag between feet and rock over head and drop
  - 3) practice sliding by using a bean bag on the floor and pushing it with a foot
  - 4) grasp knees and rock on mat
- 

## **Divisions of Space**

self space

general space

- 1) standing still swing arms in circle, do with head, legs, fingers etc.
  - 2) move around room to experience general space, can do with specific body parts
  - 3) use a ball and let it touch all the space that your body takes up, now take the ball and explore the room
- 

## **Dimensions of Space**

directions: forward, backward, to one side; to the other side; up, down

levels: high; low

planes: flat; round

pathways: straight; curved; zig zag

speed: slow; medium; fast

rhythm

- 1) use the tambourine and tell child how and where to move
  - 2) lying on floor raise certain body part high, standing make part go low
  - 3) knock 2 blocks together and instruct child to move varying speed
  - 4) cover a mat with your body to experience a flat plane, a ball for a round plane
-

## **Miscellaneous Movement Experiences**

- 1) sit face to face and push each other at the shoulders, do the same back to back, take partner for a ride and push with back
- 2) pulling or pushing partner by arms or legs around room
- 3) various exercises, demonstrate and physically assist, later do to music with vocal cue
- 4) head, should, knees and toes OR head, shoulders, (substitute child's name) 1,2,3 (do action 3 times)
- 5) push against objects such as the wall, boxes, large balls, etc. or pull at tug of war
- 6) pretend to be popcorn popping on beat of a drum, twist arms outstretched and be a washing machine
- 7) make a bridge with body - back toward floor/stomach toward floor
- 8) make a bridge and partner crawls under
- 9) ankle and crab walks
- 10) animal walks - available in most basic physical education books
- 11) crawl - like a puppy dog/like their baby brother or sister
- 12) pretend something is pulling/pushing you to the wall or whatever
- 13) put masking tape around child's hand and experience what it's like getting stuck to other things and people, pretend whole body is stuck to something
- 14) deep breathing - feel with hands how body relaxes
- 15) stretch to the sky then go limp like a rag doll
- 16) shake specified body parts and later shake whole body (then shake out)
- 17) be small like a balloon after feeling it, then feel a real one expand and make body big and fat like a balloon
- 18) wiggle on your back and feel the floor
- 19) ride on an adults back
- 20) lift objects with feet

21) 2 adults enclose child in their joined arms and sway child from side to side

22) do a back to back push up - **very hard**

23) adult should support small child in many ways - carry, lift, rock, piggyback twirl around, sit child on knee and bounce up and down

24) let child experience the feeling of being contained eg. arms around child swing or sway

25) free falling on a soft mat

26) on hands and feet move across floor, lift 1 arm up, lift 1 leg up, kick 2 legs up

27) two children in a crawling position, cover with a blanket and pretend to be a turtle

28) lie down, fold arms and bend knees, then sit up

29) sitting on floor, turn body around in a circle using hands and feet

30) take shoes off and experience walking outside on grass, sidewalk, in sand, on cement floor, on carpet

31) take a partner, one sits on floor, other feels partner's body parts and surfaces moving it passively, experiencing joint movements eg. at elbow

32) creative movement: (from Vanier, Teaching Physical Education in Elementary Schools)

a) Play in the leaves

put on your coat, it is chilly

run up the big hill and back down again

walk through the leaves and kick them with your feet

stoop down and fill your arms with leaves and take them over to the big pile

rake the leaves into a pile

run and jump into the leaves

lie in the pile of leaves and cover yourself with them starting at your feet

let's pretend we are a leaf and fall gently to the ground

walk across the stream balancing on the stepping stones

jump back across to the other side

run up and back down the big hill and back to the house

b) Indian Scouts

on horses gallop

make high jumps over fallen trees

dodge in and out of tall trees

dismount

creep slowly

go under the bushes after the bear

crawl and go out of sight

hide behind a tree

peer around the tree

take big steps down a big hill

jump from rock to rock

drop on 1 knee to shoot with bow and arrow

remount horses and gallop home

c) Halloween

pretend to make self scary and be a witch, goblin, or ghost, listen to record and do actions on cue (Hap Palmer's Movin')

33) dance to lively music eg. Bert Kemphert Music, Hal Palmer Music, student can bring in favourite record

34) body awareness games and activities on the record "Getting to Know Myself" by Hap Palmer (the whole record is excellent)

35) various other Hap Palmer records have specific songs that involve body movement (Easy Does It, Feelin' Free, Learning Basic Skills Through Music #1 and #2, and Learning Basic Skills Through Vocabulary)

With the young visually impaired and multihandicapped it is also important to develop a movement vocabulary. Sometimes words are excellent motivators for movement. (eg. pop like a popcorn) If used daily they can become very familiar and later be used in combinations or in different orders. Rhythm can be explored. (eg. run, run, run, jump....., or walk, twirl, walk, twirl) Word associations can be experienced. (eg. can you be scary like a monster). The teacher can also use sounds for encouragement. (eg. "boom" when falling on a mat or "swish" when swaying arms like a tree) More ideas are as follows:

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### **Word Associations**

#### **Can you be: Sounds for Encouragement**

as roly as a roly poly Boy-ong Bong, bong, bong

as small as a mouse Boom Tu-tu-tu

as round as a ball OooOOow Choo Choo

as wiggly as a worm ooooOOOO Tick Tock

as tall as a house Va-room Swish swish

as pointy as a pencil Pow Aaa

as floppy as a rag doll Ka-boom Oooooo

as silly as a clown Shhhhh TTTTTT

as fat as a balloon Buzzz Fissss

as scary as a monster SSSS Clink, Clink

as scratchy as sandpaper Ta-ump, Ta-ump Rah

as knotty as a knot Wooo

as stretchy as an elastic

---

## Single Action Words

Travelling Actions: run; skip; creep; rush; flee; slither; hop; gallop; dart

Jumping Actions: leap; toss; prance; soar; hurl; bound; bounce; fly

Stopping Actions: freeze; perch; anchor; settle; hold grip; pause

Contacting Actions: shrink; close; shrivel; narrow

Sinking Actions: collapse; lower; fall; sink; drop

Vibratory Actions: shiver; quiver; wobble; patter; shake; tremble; vibrate; shudder

Turning Actions: spin; whip; whirl; twirl; swivel

Percussive Actions: sharp; explode; patter; punch; pound

Expanding Actions: grow; spread; open; release; reach

Rising Actions: lift; rise

It is highly recommended that a wide variety of equipment be used when exploring movement. The following section includes activities that have been successful with young visually impaired and multihandicapped children. These are only a few suggestions. Many more can be invented and included.

---

## Hoops

- 1) hoops on floor - move around/over
- 2) on the spot, put one body part in the hoop and move
- 3) as above using combinations of body parts
- 4) roll the hoop, try to keep up with it
- 5) roll it to a partner
- 6) on the floor run and jump in it, pretend it is a puddle and stamp feet and splash
- 7) twirl the hoop
- 8) twirl on different body parts

- 9) move around while twirling it
  - 10) on floor, jump in it and wiggle out from under it, can do with a partner
  - 11) balance hoop on different body parts (eg. on head and pretend to be a bubble)
  - 12) use hoop as a jump rope
  - 13) spin hoop
  - 14) spin hoop and run around it until it stops spinning
  - 15) pretend it is a steering wheel
  - 16) musical hoop game
  - 17) Hap Palmer song "Walking around a circle" from Getting to Know Myself
- 

### **Bean Bags (b.b.)**

- 1) b.b. in scatter formation, walk around all of them
- 2) as above only jump over them when you find them
- 3) work with one on the spot, put on the floor and get over it different ways
- 4) can your hands help your feet get over the b.b.
- 5) make a bridge over the b.b.
- 6) make a bridge over it and get different body parts high
- 7) make a low bridge over it
- 8) throw and catch with b.b.
- 9) throw with 1/2 hands
- 10) throw to left/right/behind/in front of/in garbage can
- 11) can you throw with another body part besides your hands (eg. use teeth, head)
- 12) throw b.b. to the wall using overhand/underhand/sidearm
- 13) on floor push b.b. with a different body part

- 14) b.b. on body part take it for a ride (eg. on back, on stomach)
  - 15) use b.b. and hoops to play a game of fill the basket
  - 16) use b.b. and scoops to practice throwing up and catching
  - 17) make b.b. touch body parts and take it for a ride
  - 18) relays and races - moving b.b. special way to goal
  - 19) how many ways can you pick up the b.b. (eg. knees, feet, teeth, hands, elbows)
  - 20) positional concepts - put b.b. behind, in front of, to the side of (beside)
  - 21) be a shaggy dog (on hands and knees, crawl with b.b. on back, shake it off)
  - 22) hold b.b. between feet and rock it over your head and drop it on the floor
  - 23) balance b.b. on different body parts
  - 24) hold b.b. between knees and jump
  - 25) practice underhand throw with b.b.
  - 26) use a chair, bench etc. place b.b. over, under, to left, to right, in front of, behind
- 

## **Ropes**

- 1) ropes scattered around room, child walks and jumps over rope
- 2) rope in a straight line - can you stretch from one end to the other
- 3) hold rope and turn around and let it fly in the air
- 4) with partner play at pulling each other along floor
- 5) with partner pull rope
- 6) jump over rope - go back and forth several times
- 7) rope on the floor - walk sideways along it  
walk heel to toe along it  
do a scissor walk along it

do a straddle walk along it

8) children in single file, use 2 ropes on both sides and children hold on 1 side with left hand and on other with right hand - practice walking in line to a simple rhyme

9) with rope drooped under partner's arms pretend to have a pony

10) shake the rope like a snake

11) partner sitting on a scooter, holding a rope, pull and take for a ride

12) balance on rope with 1/2 feet

13) walk forward/backward along rope

14) leap over the rope

---

## **Balls**

1) sit and roll to wall

2) sit and roll to partner, (soles of feet touching) receive rolling ball

3) stand and bounce (using 1 or 2 hands)

4) stand, bounce and catch

5) perform a continuous bounce

6) can you bounce and catch it 10 times on the spot and then sit

7) bounce it against the wall

8) bounce it around the room

9) bounce it to a partner

10) throw it up

11) throw it far

12) throw to partner

13) throw up and catch

14) throw to the wall

- 15) roll ball on floor with a body part
  - 16) in circle with other children roll or bounce
  - 17) kick
  - 18) kick to wall and trap it
  - 19) relay games - pass over and under
  - 20) suspend ball (with bell attached) and hit with hand or bat
  - 21) pass ball around circle - play poison ball
- play cat and mouse
- call ball
- 

## **Benches**

- 1) get on the bench
- 2) lead with body part requested
- 3) can your hands help your feet on the bench
- 4) get on the bench without facing it
- 5) walk along bench
- 6) straddle 2 legs on either side of bench and move along it
- 7) let hands pull body along bench on stomach/back
- 8) on back let feet push you along bench
- 9) balance on the bench a different way
- 10) get off the bench a different way
- 11) jump off and stretch in the air
- 12) how far away from the bench can you land when you get off
- 13) go under the bench - let one body part lead (eg. feet first, head, etc.)
- 14) climb over it

- 15) do a push-up on the bench
  - 16) jump off different ways
  - 17) use with hoop - crawl along and through it
  - 18) walk along it and step over/pick up.....
  - 19) hold with 2 hands and jump getting legs high in air/perhaps over to other side
- 

### **"Martha" Mat**

- 1) practise any kind of movement over, on, along or around the mat using different directions or body parts
  - 2) jump on, around or over the mat
  - 3) move on the mat taking weight on different body parts
  - 4) roll on the mat - rock
- stretch and curl
- twist and turn
- arch and bridge
- 5) do an activity to get feet in the air
  - 6) cover mat with body - hide it
  - 7) touch much of the mat, touch a little of it (eg. toe, finger)
  - 8) if using a thick gymnastic mat use a bench to practice jumping in air and landing in different ways - on stomach/back
  - 9) practice various rolls front/back/log
-

## **Climber and Apparatus**

- 1) climb up and touch bell
  - 2) climb from 1 part to another without touching the floor
  - 3) what parts of your body can you use to take you up, down
  - 4) climb the ladder but don't use feet
  - 5) skip 1 rung as you climb
  - 6) go up fast, come down slowly
  - 7) race your partner going up
  - 8) hang on the rope
  - 9) can you climb the rope
  - 10) swing on the rope
  - 11) transfer from the rope to the ladder
  - 12) on the bar swing
  - 13) get over the bar
  - 14) move from the bar to another part of the climber
- 

## **Roller/Ice Skates**

- 1) stand with/without assistance
- 2) stand from kneeling with/without assistance
- 3) stand from sitting with/without assistance
- 4) stand and touch toes
- 5) walk 5 feet with/without assistance
- 6) cross width of gym/rink with/without assistance
- 7) glide on 2 feet with/without assistance
- 8) lift glide (other foot off floor/ice)

9) alternate 1 foot glide and push off

10) stop (snowplow on ice, with roller skates with rubber stopper)

11) skate forward/backward and stop

Upside down plastic garbage cans are excellent and safe for support, chairs with protruding legs or tube connected legs are dangerous.

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### **Beach Balls**

1) many skills outlined under the ball section can be played with the beach ball

2) circle kick ball - children in circle kick beach ball to keep it in the circle

3) circle bat ball - as above, sitting use hand/bat to keep it in the circle

4) use on a parachute - make waves and try to knock it off

5) adapted volleyball - divide room with bench, child picks ball and throws it over to the other side of the bench

Beach balls are light and safer than regular balls. Attach a bell to them.

---

### **Scooter Boards**

(never allow standing)

1) sit on it and move forward, backward, to a goal

2) use stomach/back move it

3) move about with one part of the body on the board

4) spin or turn

5) keep yourself as low as possible (also high)

6) partners - one on scooter, other push back and take for a ride

7) sit on scooter and use only hands to move (only legs, both hands and legs)

8) on stomach or back do above

9) on both knees move

- 10) on 1 knee and 2 hands move (change knees)
  - 11) individual relays and races (eg. go across room, pick up a bean bag and return)
  - 12) obstacle course - around boxes, through a tunnel etc.
  - 13) sitting on a scooter, bat a beach ball along the floor
- 

### **Parachute Activities**

- 1) hold chute with 2 hands, step back to tighten it
  - 2) holding, walk to right/left - all make a wheel
  - 3) flutter and shake chute to make big/little waves
  - 4) put several light balls on the chute (perhaps add bells to them) students make waves and try to knock the balls off (creating a popcorn effect)
  - 5) lie chute on floor and take turns crawling under the chute to a voice across on the other side
- 

### **Trampoline** - always use bare feet for safety

- 1) getting on the tramp safely (sit down, pretend sitting on the edge of your bed, hold on with hands, swing legs over and on, pull self on with hands and slide to the centre)
- 2) sit at centre and use hands to push (also legs)
- 3 on hands and knees - maintain balance
  - push and receive movement
  - get part or whole body in air
- 4) get to a standing position - feet apart  
turn 90, follow voice, remaining at centre
- 5) stand and bend knees to push and receive motion
- 6) learn to stop by bending knees and receiving motion - do many times
- 7) bend knees and bounce with control

- 8) jump getting body in air
  - 9) jump continuously
  - 10) jump continuously and follow voice by turning at 90 and remaining at centre
  - 11) practice stopping on command
  - 12) look for feet landing back at centre, head straight, arm lift and drop, knees extend and return to jump positions
  - 13) knee drop - stiffen body, head up, drop on knees and return to jump position
  - 14) other stunts - jump and touch knees
- jump and tuck knees
- do hands and knee drop
- 15) hands and knees bounce and return to jump position
  - 16) seat drop to knee drop
  - 17) seat drop to seat drop and stand
  - 18) seat drop ½ turn to stand
  - 19) hands and knee drop to knee drop and vice versa
  - 20) knee drop to seat drop
  - 21) sing various rhymes to motivate child to jump
- 

### **Miscellaneous Activities with Equipment**

broomstick/hockey stick - straddle and pretend to ride a horse, play music

cardboard packing boxes - climb in and close, roll around and play Jack-in-the-box

bowling - make pins from Javex bottles, child sits on chair and rolls ball

scoops - cut from Javex bottles and use with b.b. to throw up and catch, throw to wall, to partner

ticker tape - cut from crepe paper - swing from side to side

- walk with it trailing high/low

- swing up/down

- twirl around body

- make different shapes

- make waves

- move to music

- use 2, 1 in each hand

kleenex - staple to rubber band and wear on 1 hand to help discriminate left/right, use with tape and tape to back to make a tail - play at running away and saving tail from being caught

rocker - if large lie on it, or sit with partner and rock

- if regular size, sit and rock, then stand using wide/narrow base

balloons - child hold string attached to it and walks experiencing it flying in the air

- hold the string and kick, or bat up with hand

- suspend with a string and hit with hand

use outside equipment when the weather is good, perhaps teacher could be leader and play follow-the-leader using sound cues

take certain equipment outside to use

padded doughnut - child pushes and receives impact

- child rides inside and is rolled (requires strict supervision)

mat roll (roly poly) child straddles legs, sits or lies on stomach and experiences different positions, can also roll it along the floor using whole body

large ball with inner tube - push and receive impact of someone pushing it

- also good for child to roll over and experience different balances

after thorough investigation with equipment invite child to choose 1 piece of equipment, child should show different ways of how equipment can be used

while 1 child is working on a trampoline others can be involved in either group games, and obstacle course or rotate around stations where equipment is placed for specific skills

obstacle course ideas: involving various combinations of the following equipment

large gymnastic mat and bench - get along bench various ways (forward, backward, sideways) and jump onto the mat (on back, stomach, low, high, stretch, curl)

horizontal ladder - move along on top of rungs, in between rungs, forward, backward, sideways, using hands and feet, feet only

climber - use various ways previously listed

wooden boxes - climb over and on, stand and stretch, jump off various ways

bench - go along various ways, go under (feet/head first, on back/stomach)

- go over then under (around)

- place tire on and child must crawl along and through

2 chairs and 1 hoop - set up with hoops on top of chairs, and child crawls under and climbs out or vice versa

mat on a slant, child crawls. up and performs a log roll down "hill"

tunnel - use a table and drape a blanket over it, and the child crawls through (watching out for the boogie man)

slant board (storming plank) - attach to a pull out climber and experience going up and down on feet or on tummy

tires - climb in and get across a series of them in a row using hands and legs if necessary

yard stick - tape to floor and child must walk along keeping feet on it

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# GAMES

Games of low organization help develop motor skills previously learned and may also provide an opportunity for the child to go beyond his skill ability and create new movements. Games can be individual, providing self testing situations or be in a group, demanding social integrations with peers. The dynamics of group game situations will not be detailed, however, their importance and contributions to the development of the total child is to be noted.

Game skills, included in the curriculum of the visually impaired and multihandicapped depend on the skill level of the individual child, his need for the experience and the adaptability of the game. Older children may be involved in such games as volleyball or bowling, etc. and various lead-up games, while the young visually impaired and multihandicapped require much modification, starting with the basic identification of the equipment and following with practice of basic skills apart from the game. A series of progressively more difficult performance objectives are experienced. In bowling, the young child should practice the underhand roll, then work toward rolling it correctly to the wall, then to a partner, then to one large pin, etc. For young children there are an endless number of simple games which can be broken down into component skills, and easily practised. Basic object control skills such as rolling, throwing, catching, striking, etc. can be motivated and reinforced through practice when playing these simple games.

A variety of equipment has been previously listed. A number of games of low organization that visually impaired and multihandicapped can participate in will be described in this next section.

---

## **Give everyone a turn and keep competition to a minimum**

- 1) **Poison Ball** (hot potato) - sitting in a circle, children pass a ball around, when the music stops the child with the ball must leave (can do also with 2 balls)
- 2) **Twirl Hoop** - children sit in a circle, a hoop with a bell attached is twirled in the centre, teacher calls a name and the child stands and catches the hoop.
- 3) **Circle Kick Ball** - standing in a circle, children try to keep a beach ball (with a bell attached) within the circle by holding partners hands and kicking the ball.
- 4) **Duck, Duck, Goose** - sitting in a circle, one child walks around patting others on the head, saying "duck", when child wants to be chased he calls

one a "goose", that child stands and chases 1st child (assistance may be required to assist children around the circle and back to their position where they were sitting).

5) **Dodgeball** - sitting in a circle, children roll a large ball with a bell to the centre in order to touch a child who is in the centre, when touched, child changes places with child who rolled ball.

6) **Roll Ball** - sitting in circle, legs spread, child chooses another to roll to, asks child if ready and rolls.

7) **Circle Bounce** - as above only standing and bouncing to each other.

8) **Circle Bat Ball** - sitting in a circle, children use hands or bats to keep ball (beach ball with bell) in circle.

9) **Fox and Rabbit** - sitting in the circle, the children pass 2 balls around, 1 large (fox) and 1 small or differently textured or with a bell, (rabbit), when fox catches up to rabbit, rabbit is out of game.

10) **Simon Says**

11) **Tails** - tape kleenex to back of child, children run and avoid losing their tails, (can also let them find out how many tails they can catch)

12) **Musical Hoops** - walk around scattered hoops, when music stops must sit inside hoop (can gradually decrease number of hoops available)

13) **I Sent a Letter** - play the traditional way with a bell in a large envelope (provide assistance to those who require it to get around the circle)

14) **Hokey Pokey** - play the regular way and stress laterality

15) **Luby Loo** - holding hands and walking around the circle, play the usual way

16) **Circle Pass** - sitting in a circle, children pass 2 distinctly different balls, when the music stops, the children holding the 2 balls must change places

17) **Rock-a-bye-Baby** - quiet activity, sitting in a circle, children pretend to hold a baby and rock it to sleep, at the end of the song (which they help sing) they lie down and pretend to sleep

18) **Daddy Long Legs** - 1 child (it) stands at one end of the room while others line up at the opposite end. Children say following rhyme, do actions, and on cue, turn and run back to original position.

Come little girls

Come little boys Start walking slowly to other child

Hush little Children

Don't make a noise Tiptoe and continue forward

Climb up the stairs Pretend to climb up stairs

Just as I do

Watch out for Daddy Long Legs

So he won't catch you Turn and run back to original position

19) **Punchinello** - holding hands and walking around a child in the middle of the circle, children say rhyme and to actions suggested by "it"

What can you do Punchinello, little fellow

What can you do Punchinello little man

(child initiates body action)

We can do it to Punchinello, little fellow

We can do it to Punchinello, little man

(other child has a turn in the middle)

20) **Fill the Basket** - scattered b.b. children pick them up and put them in a hoop placed in the centre of the floor (teacher can pick them out and throw them away again as long as you want game to continue.

21) **What Time is it Mr. Fox** - one child at one end of the room (fox) others line up at other end (holding hands) they ask the question and fox tells time (eg. 3 o'clock) and takes 3 big steps counting out loud this continues until the fox says "supertime" and then children turn and run back.

22) **Farmer in the Dell** - play the usual way, holding hands in a circle and saying the rhyme, child chooses an action for others to copy (eg. jump) and children say 2nd rhyme (The farmer can jump etc.) and copy action.

23) **Ring Around a Rosey** - play the traditional way and practice standing up and sitting down

24) **Mulberry Bush** - to the same song children sing:

This is the way (child's name) (action)

This is the way (child's name) (action)

This is the way (child's name) (action) on a Friday morning (change accordingly)

25) **Arm Dance** - Discuss various movements children can do with their body parts then do dance to the rhyme

I know a new dance and it's called the arm, if you've got lots of charm you can do the arm

On your mark get ready 1,2,3

Come on everybody do the arm with me

Following verses can be carried on substituting:

leg - eat an egg

head - make your bed

body - don't look shoddy

26) **Jack in the Box** - 1 child hides in a large box (or large push doughnut with a box over his head) others stand around and say rhyme, and on cue child pushes box away and climbs out

Jack (substitute child's name) in the box

Sitting so still

Won't you come out

Yes you will

27) **Hands on** - teacher says "hands on (body part)" and repeats naming another body part and continues and speeds up pace

28) **Clean Up the Backyard** - place bench across the middle of the room, scatter b.b. around room on both sides, children take turns cleaning up 1 side of the room by picking up b.b. and throwing them over the bench, and then go to the other side and do the same

29) **Musical Chairs**

30) **Guess Who** - 1 child is allowed to feel the face of another and guess who it is

31) **One Finger, One Thumb** - sing song and do action, following by adding more body parts to the song

1 finger, 1 thumb keep moving

1 finger, 1 thumb keep moving

1 finger, 1 thumb keep moving, to chase the blues away

Add - 1 head, 1 arm, 2 arms, 1 leg, 2 legs

32) **Knock the Pin Down** - can play in a circle formation using a Javex bottle with a bell attached and children roll the ball and try to hit the bells OR  $\frac{1}{2}$  number of children on 1 side of the room and the other  $\frac{1}{2}$  at the other end, pins in centre of the floor, children keep rolling the balls back and forth.

33) **Call Ball** - teacher calls child's name and throws a bell ball, child goes after ball and returns it to the teacher

34) **Join in the Game** - children in a circle formation, take turns being in middle -

Let everyone (action) like (child's name)

Let everyone (action) like (child's name)

Come and join the game

You'll find that it's always the same

35) **Cat and Mice** - 1 child wears a bell (cat) others are mice and avoid being caught by the cat

36) **Seven Jumps** - from "Primary Folk Dances" by Herman, children practice actions first and learn to do them by verbal prompting, sitting in a circle, then listen to music and do same actions on cue with help from teacher

Through creativity one can enrich the life of young visually impaired and multihandicapped children by providing experiences that help them understand how their body works in space.

Movement experiences, if practised with a comprehensive program of fundamental locomotor skills and simple games, will provide the visually impaired with the best possible variety of perceptual-motor experiences.

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3 Pigs

3 Billy Goats

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