



Braille Resource Packet For Families Of Young Children



Compiled by
L. Penny Rosenblum, Ph.D.
rosenblu@u.arizona.edu
520-621-1223
March 2013

Table of Contents

	Page
Braille for My Baby: Six Things You Can Do at Home for Your Young Blind Child	3
Sample Menu of Weekly Family Literacy Events	7
Print-Braille Books for Young Children	11
Creating and Using Tactile Experience Books for Young Children with Visual Impairments	15
Ideas to Promote Braille Awareness and Literacy	22
Beginning Braille Competencies	23
Interventions to Facilitate Emergent Literacy	25
Braille Alphabet	30
Dots for Families	32
Resource List for Early Braille Literacy Materials	33

Braille for My Baby: Six Things You Can Do at Home for Your Young Blind Child

by Graciela Tiscareño-Sato

I remember the scene like it was just this morning: my six-month-old daughter sitting in my lap, “reading” *Touch and Feel Wild Animal Babies*. It was our first board book and my first time reading to my first-born child. I hadn’t yet heard of books for infants with Braille in them so it was just a regular touch-and-feel type book I had picked up in the bookstore the day before.



We got to the smooth dolphin skin and she started moving about excitedly, as if she had made a great discovery. She moved her face to the book to smell the surface she was touching. I just sat there and let her explore the book however she wanted. When I turned the page to the bumpy lizard skin, I thought she was going to fall off the chair with excitement.



It was at that moment that I committed myself to reading to her every night, even though she was blind. It seems so silly to me now that I had that thought back then--what did I mean, “even though she was blind?” What was I thinking? But that’s how it was. I’m not sure I had gained my perspective yet after enduring nearly five months in the NICU, five surgeries, and having her home just a few months after her severely premature birth (and eighteen-ounce birth weight).

Three months later at my request, my Blind Babies Foundation counselor arranged a lunch for me with a woman who had a blind daughter attending Stanford University, just across the Bay from my home. We met at a café in Berkeley so I could ask my ton of questions to a mom who had already raised a blind daughter. I remember Meb walking in with an armful of books, catalogs, and magazines--everything I needed to start bringing books in Braille into my home. It was that day that I signed up with Seedlings Braille Books for Children and ordered my daughter’s first dozen Braille board books (including her favorite *Touch and Feel Wild Animal Babies*). We were off. We had (thankfully) entered the world of early Braille skills development for my infant, an effort that has paid dividends as she begins to establish more advanced literacy skills at the age of seven.



“She has excellent tracking skills,” I hear at IEP meetings.

“We usually have to work really hard to get little ones to track well but she just does it so naturally,” is another favorite comment I love to hear.

How did we get here? How did we get baby Milagro ready to learn Braille, to track lines of Braille well, and to enjoy writing Braille and reading her own stories?

Here are the things we did at home long before she started formal Braille lessons at the age of three:

Acquired a dozen touch-and-feel and scratch-and-sniff books. Very early on, we committed to the joy of reading with our young child, a joy we didn’t want to miss out on just because she didn’t see the pictures. She very much learned and appreciated the concepts associated with books, page turning, and just enjoying the reading experience. Some of our favorites are published by DK (Dorling Kindersley). They’re available in major book stores and through <www.dk.com>.

Learned the Braille code ourselves. We got some little wooden tiles of the Braille alphabet from a lovely man in Florida. We used them to quiz each other on the code, like a weird form of Scrabble for mom and dad. We attended a one-day Braille workshop for families at the California School for the Blind. We signed up for the free online courses through the Hadley School for the Blind, see <www.hadley-school.org/>. We got the *Just Enough to Know Better: a Braille Primer* book from The National Braille Press. It contains a large pull-out Braille sheet of the Braille alphabet and Braille contractions. We taped it to the back of the bathroom door. Seeing the Braille code five-minutes at a time is a great way to start. Having an entire book dedicated to teaching Braille to families is a must-have resource. It’s available at <www.nbp.org> or by calling toll-free (800) 548-7323.

We got a Perkins Brailler so we could produce little labels to put around the house when she learned to walk. Our teacher of the visually impaired (TVI) at the local preschool, Sue Douglass, provided this to us and showed us how to load paper, un-jam the machine, etc. Labels we created first were: light, table, high chair, bathtub, door, diaper changing table, drum, doll (taped on forehead), sink, rocking horse, potty, crib, and window.

We simply Brailled them on card stock paper, cut them out, and taped them to the corresponding objects around the house. Some of those labels are still there. I remember



Sue telling me, “It’s important that she not only touch the Braille around the house, but that she begins to associate the bumps with meaning.” As she went to the sink to wash her hands, we took a moment to show her the Braille label, run her fingers over the word, and say, “sink.” Eventually, she started echoing the word back to us. After that she would approach the tag herself to ‘read’ it. This was a very important thing that we did for her and I highly recommend it. Another way to accomplish the same thing is to ask a TVI [or a Braille-proficient blind adult from the Federation] to create the labels for you. They can usually do this on special adhesive labels that stay up longer than our paper versions.

One tip: get Dr. Penny Rosenblum’s color-coded sheet and use it to code the keys on the Braille. It makes writing so much faster for us sighted parents. Additionally, it’s a terrific way for siblings and friends to be able to easily type their names, notes for the blind child, and so forth. We’ve used this since 2007 and wish we’d had it earlier. It’s available by e-mailing Dr. Rosenblum at <rosenblu@u.arizona.edu> and asking for her “Beginning Braille Competencies” handout (from the CTEVH conference) containing the Braille Alphabet sheet for color coding.

If you can’t get a Perkins Braille, there is always the trusty low-tech slate and stylus. It fits easily in your purse and lets you make quick shopping lists with your toddler. This way, she can enjoy shopping with you and touch Braille with a purpose. (This gets even more fun when kids get older and can read the shopping list to you.) We got ours at the NFB store when we visited NFB headquarters in Baltimore. You can buy them online at the NFB Independence Market at <www.nfb.org/nfb/Independence_Market.asp>. If you want to start writing with the slate and stylus immediately, get the one-page reference sheet designed specifically for this purpose. It’s inside *The Braille Trail: An Activity Book* by Anna Swenson and Frances Mary D’Andrea at AFB Press: <www.afb.org/store/product.asp>. I still keep copies of this reference sheet with my slate and stylus in my purse because it’s so portable.

We got the Braille Book Bag from National Braille Press that contains Braille magnet letters, books, a booklet, and many other items. Our Blind Babies Foundation counselor arranged this for us and it’s been a great Braille toy set and resource for our family. Of course siblings and visiting children also inquire about the Braille on the magnetic letters so it’s quite the conversation piece. See <www.nbp.org/ic/nbp/readbooks/index.html> for more information.

We introduced our child to Perkins Panda and his books and music. Our Blind Babies Foundation counselor brought the complete Perkins Panda collection produced by the Perkins School for the Blind into our home when Milagro was about eighteen-months old. It included books, tapes (narration and music), and a large stuffed toy bear named Perkins Panda. It was a great way to reinforce body parts with a stuffed toy bear that has many different textures on his body, that are all matched within the Perkins book called *Belly Button*. Today at the age of seven, she can read many of the words in these books herself. She says “I love you Perkins Panda” and sleeps with him. See <www.perkins.org> for details.

Started bringing Braille board books into our home. Seedlings Braille Books for Children and the Braille Institute in Los Angeles have been our primary resources. Both give away Braille books for free on a regular basis in addition to maintaining catalogs from which we order. Seedlings has their Anna’s Angels program: <www.seedlings.org>; Braille Institute has their

Dots for Tots program, see <www.brailleinstitute.org> or call toll-free (800) 272-4553 for details. There are others as well. Most of the Dorling Kindersley Touch-and-feel books mentioned earlier are available with Braille labels from Seedlings too. The important thing to us is that we committed to reading with our child every night. We have three children now and made the same commitment to each of them.

All of this effort paid off for us on the last day of kindergarten as the class showed off their newly acquired reading skills. On that day, in her general education classroom, Milagro stood up and read "The Bumblebee," a favorite poem, in front of her entire class of peers and their parents. The cheers from the audience when she finished and the smile on her face are priceless memories for me. Not only was it fun to watch, but it was validation that all those early actions we took at home were indeed valuable to get her started down the path of literacy.

Graciela Tiscareño-Sato, MIM, is a mother of three, a global technology marketing professional, a published writer and speaker, a military veteran, and an advocate for her daughter Milagro. Together with her husband, she created the DVD called *Letting Your Child's Wild Side Out: Raising the Wild and Confident Blind Baby, Toddler and Preschooler*. She lives with her family in the San Francisco Bay Area and can be reached through the Web at <www.babymilagro.org/dvd>.

[\(back\)](#) [\(contents\)](#) [\(next\)](#)

<http://www.nfb.org/images/nfb/Publications/fr/fr28/fr280113.htm>

Sample Menu of Weekly Family Literacy Events

Each week try to do at least three activities from List A, two from List B. and one from List C. You may choose to do the same activity more than one time, or you may do one activity several times. The individual differences of families might be addressed by providing choices or a menu of activities to promote literacy opportunities and promote home-school partnerships.

List A - Casual Holistic Activities

1. Read to your child for 10 minutes. When appropriate, use factual or braille books which are fun for you and your child (See list contained in this handout).
2. Let your child observe you reading something, either for fun (such as a magazine or a book) or to get a job done (reading a recipe or the TV Guide).
3. Give your child paper and something to write with (Slate and stylus and/or braille). Encourage your child to scribble by placing a piece of braille paper on the carpet and make braille dots by poking holes in the paper using a golf tee.
4. Encourage your child to read a book or magazine, pretend-read, or look at the pictures in a book or magazine for five minutes.
5. Talk with your child about something you have read together.
6. Let your child listen to books on tapes or records.

List B- Interactive Activities Dealing With Literacy Skills or Strategies

1. Encourage your child to point to or examine words or letters (on signs or labels in your home in Braille) that she or he knows. Talk to your child about words or letters (Braille/Print).
2. Encourage your child to tell you a story, either one that is already familiar or one that the child has made up. Let your child help you make a shopping list.
3. Play sound games with your child, such as "I am thinking of something in this room that rhymes with fat or that begins like Dan."
4. Play word games with your child, such as "Let's see how many animals (or colors or vegetables) we can name."

List C- Extended Activities Requiring a Substantial Time Investment

1. Take your child to the library to check out books or purchase books from book store. Print books can be easily adapted in braille by having someone braille on clear contact paper and then adhering each sheet to the print pages.
2. Help your child write a letter to a friend or relative.

3. Have your child tell you a short story while you write it down in print or braille; then your child can draw a picture to go with the story.
4. Take your child to the zoo, a museum, a farm, the airport, or someplace that she or he has never been before; talk about what you experience.

Predictable Books

Predictable books are books in which parts of text are repeated often, such as in "The Little Red Hen". When the Little Red Hen says "Who will help me, ..." a child soon will anticipate when that line will occur and be ready to join in with the reader on that part. There are many, many predictable books available in libraries. These are only some suggested ones.

- Arno, E. (1967). The gingerbread man. New York: Scholastic.
- Asbjorsin, P. (1973). The three billy coats gruff. New York: Houghton-Mifflin.
- Blegvad, E. (illust.). (1980). The three little nips. New York: Atheneum.
- Brett, J. (1987). Goldilocks and the three bears. New York: Dodd.
- Brown, M. W. (1956). Press. Home for bunny. Racine, WI: Golden Press.
- Butler, D. (1988). MY brown bear Barne. Greenwillow.
- Carle, E. (1984). The very busy solder. Publisher.
New York: Putnam
- Charlip, R. (1964). Fortunately. New York: Parents Magazine Press.
- Charlip, R. (1969). What wood luck! What bad luck! New York: Scholastic.
- Domanska, J. (1969). The turnip. New York: MacMillan.
- Eastman, P. D. (1960). Are you my mother? New York: Random House.
- Galdone, P. (1975). The gingerbread boy. New York: Clarion.
- Galdone, P. (1973). The little red hen. New York: Scholastic.
- Guarino, D. (1989). Is your momma a llama? New York: Scholastic.
- Guy, G. F. (1991). Black crow, black crow. New York: Greenwillow.
- Keats, E. J. (1971). Over in the meadow. New York: Scholastic.
- Martin, B. (1970). Brown bear, brown bear. New York: Holt, Rinehart and Winston.
- Nichol, P. (1983). Once a lullaby. New York: Greenwillow.
- Stevenson, J. (1977). Could be worse! New York: Greenwillow.
- Thomas, P. (1971). "Stand back" said the elephant, "I'm coins to

sneeze." New York: Lothrop, Lee & Shepard.

Wickstrom, S. A. (Illustrator). (1988). The wheels on she bus. New York: Crown Publisher.

Stories for Young Children to Use Objects

Brown, M. W. (1942). The indoor noisy book. New York: Harper & Row.

Household sounds are very appropriate for toddlers and preschool children.

Numeroff, L. J. (1985). If you give a mouse a cookie. New York: Harper & Row.

Most of the concepts are appropriate for children who cannot see pictures although a few are not. Suggested ages 3-7.

Ormerod, J. (1989). The saucepan game. New York: Lothrop, Lee and Shepard.

A story game using a pan to present concepts such as on, in, handle, lid, etc. Suggested ages 1-3.

Roffey, M. (1988). Bathtime. New York: Four Winds Press.

A simple story sequence about bath and bed routine. Many items are mentioned in the story, but the number used should be adjusted to the attention and concept level of the child. For very young children.

Ziefert, H. (1988). Goodnight everyone! Boston, MA: Little Brown and Company.

A story about bedtime troubles of stuffed animals. Suggested ages 2-5.

A List of a Few Tactile Books

The touch me book. Pat and Eva Witte. In bookstores or from Seedlings (for very young children).

Pat the bunny. By Kunhardt.

Pat the cat. By Kunhardt.

Catching. By Virginia Allen-Jensen. (1983). Philomen.

What's that? By Virginia Allen-Jensen. (1977). Philomen.

Best for a nest. Lois Harrell. (1976). From APH. Probably for an older preschooler who has had some experience using tactile illustrations.

A List of Print-Braille Books

Prelutsky, J. (1986). Ride a Purple pelican. New York: Greenwillow.

Martin, B., Archanbault, J. (1988). Listen to the rain. New York: Henry Halt and Co.

Martin, B., Archanbault, J. (1989). Chicka chicka boom boom. New York: Simon and Schuster. Good for close to school age. A lot about letter names.

Preston, E. M. (1974). Squawk to the moon, little goose. New York: Viking Penguin. Concepts, probably upper preschool level.

Walt Disney's Cinderella. New York: Random House.

Yolen, J. (1987). Owl noon. New York: Philomel Books. Upper preschool or older but a beautiful story, really for any age.

Additional Resources

National Braille Press, 88 St. Stephen St., Boston, MA 02115 (This program offers a "Book of the Month" format. Books cost the same as the print edition and are available in braille and print.)

Seedlings, 8447 Marygrove Dr., Detroit, MI 48221 (Catalog available of print/braille books)

On the Way to Literacy Early Experiences for Visually Impaired Children (Includes factual braille print books.)

American Printing House for the Blind, 1839 Frankfort Ave., P.O. Box 6085, Louisville, KY 40206-0085

Beginning braille instruction for parents - self study approach: Just Enough to Know Better: A braille primer By Eileen P. Curran, M.Ed.

National Braille Press Inc., 88 St. Stephen Street, Boston, MA 02115

Braille Literacy (Pamphlet) American Foundation for the Blind

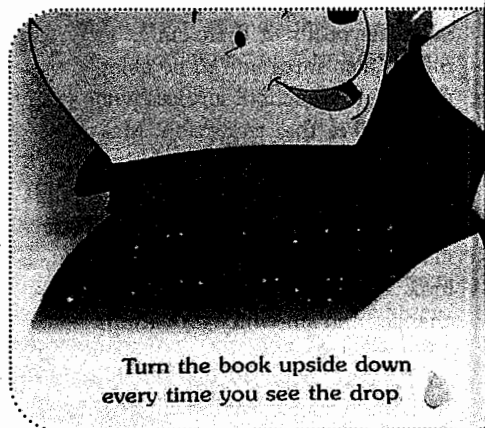
Print and Braille Literacy (Pamphlet) American Printing House

Print-Braille Books for Young Children

Who are Blind or Visually Impaired

BY SHEILA AMATO AND ELLEN TRIEF

Young children who have a significant visual impairment or blindness may have limited access to appropriate books. These children require books that provide tactile representations of pictures and braille transcription of the story.



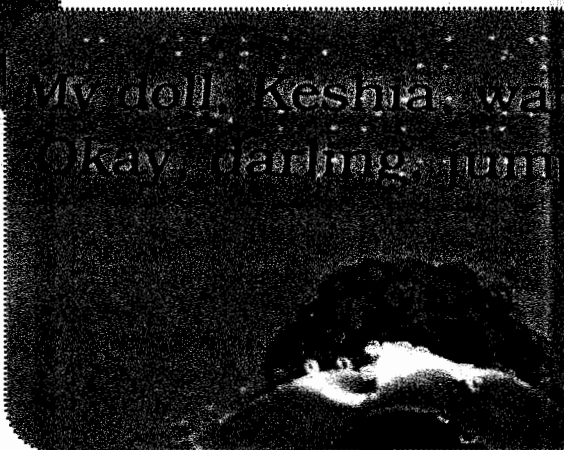
braille cell. Some examples of contracted braille include: the word braille—as represented by the letters brl; the word people—as represented solely by the letter p; and the word blind—represented by the letters bl.

A print-braille book is a book that provides both print and braille on the same page, and can be read by a child who is blind or visually impaired, as well as by a child who has sight. For a young child, the book may contain tactile representations of the pictures. The purpose of this book is to allow the child who is blind to share literary experiences with peers who are sighted.

Many children with visual impairment and blindness are placed in inclusive classrooms along with their sighted peers. These children require access to reading material in an available media in



Braille is the system of reading and writing used by people who are blind where they feel raised dots on a page with the tips of their fingers. Braille can be transcribed into uncontracted braille, which consists of just the alphabet and punctuation, or contracted braille, which consists of 196 contractions made up of varied combinations of dots within a



On this page: examples of print-braille books.

order to gain exposure to quality children's literature.

Traditionally, the use of a popular children's picture book for a three-to-seven-year-old with few words on each page would be an appropriate book to adapt. For example, some of the popular children's authors chosen for a print-braille book transcription project have included Eric Carle, Margaret Wise, Maurice Sendak, and Dr. Seuss. These particular authors provide limited, often repetitive text, with appropriate corresponding pictures to follow the storyline. The pictures clearly represent and/or symbolize what is happening within the context of each story.

The creation of print-braille books can be adapted for a community service project in schools or after school programs. Engaging older children who are creative and have some artistic ability gives them

the opportunity to provide a valuable educational service that will benefit young students who are blind or visually impaired. Projects such as these have been conducted at middle schools, high schools, and within religious organizations and scout troops. Often, each participant brings a favorite book to adapt and a team leader guides the group through the project.

Because the meaning of a picture can often be difficult for a child who is blind to interpret, the creator of the print-braille book needs to determine the most important elements of the picture and wisely choose the details that will be presented in a tactual manner. Too many tactual details may be difficult for a child who is blind to interpret with his/her fingertips. The choice of pictures to be tactually represented should correspond with

the text on the page and only the important information should be highlighted. Throughout the book, the child who is blind receives continued reinforcement each time the main character appears.

For example, in Margaret Wise's book *Corduroy*, every time Corduroy the bear appears he can be represented with a swatch of fake fur cut out in the shape of a bear and embellished with corduroy fabric to represent overalls with two securely attached buttons.

There are many choices that one can use to create a tactile representation of the picture, such as: textured paper, felt, feathers, foil, leather, cork paper, fake fur, buttons, puff paint, fabric paint, foam sheets, glue and many more inexpensive and easily obtainable items. These materials can be found in craft or

continued on page 62



www.snugseat.com

1-800-336-7684



nothing compares to a smile

- Fact: Walking is good for bones, muscles, lungs, heart, bowel and bladder
- Fact: Snug Seat Gait Trainers help teach special needs children the skill of walking
- Fact: Snug Seat Gait Trainers can be used to stretch tight hip, knee and ankle muscles
- Fact: Snug Seat helps parents and therapists get funding for the equipment they need
- Fact: Snug Seat Gait Trainers make walking fun!



Crocodile



Pony



Gator



Bronco

**List of Suggested Books for
Print-Braille Book Projects**

- *The Giving Tree* by Shel Silverstein
- *Where the Wild Things Are*
by Maurice Sendak
- *The Polar Express*
by Chris Van Allsburg
- *Goodnight Moon*
by Margaret Wise Brown
- *The Very Hungry Caterpillar*
by Eric Carle
- *Brown Bear, Brown Bear,
What Do You See?*
by Bill Martin Jr.
- *If You Give A Mouse a Cookie*
by Laura Numeroff
- *Harold and the Purple Crayon*
by Crockett Johnson

continued from page 61

art supply stores, or in your home, often by looking at clothing items you might be discarding.

Once the various textures and materials have been decided upon, they should be used consistently throughout the book. The use of a low heat glue gun works very well for affixing the materials onto the page. Each page must dry completely before starting a new page; otherwise the pages will stick together.

When many textures are added to a page, the book becomes much thicker and is often difficult to close. Sometimes the existing binding of the book needs to be removed. Holes punched in the remaining pages, and secured with rings, sturdy yarn, or ribbon, can be used to hold the book together. If necessary, a new binding can be created by using fabric and glue. Often the book

List of Parent Resources

- *Beginning With Braille* by Anna Swenson (American Foundation for the Blind)
- *Braille is Beautiful* (National Federation of the Blind)
- *Just Enough to Know Better* by Eileen Curran (National Braille Press)
- <http://www.ala.org/alsc/newbery.html> (John Newbery Medal Homepage)
- <http://www.ala.org/alsc/caldecott.html> (Randolph Caldecott Medal Homepage)

just requires a closure on the right side, which can be created by using two strips of Velcro to fasten the book; one on the front cover and one on the back cover.

Once the picture section of the book is tactually represented, the book needs to be transcribed into either uncontracted or contracted braille. The decision to use uncontracted or contracted braille will depend on the age and/or the individual needs of the child for whom the book is intended. The use of clear laminate sheets enables both the sighted and the child who is blind or visually impaired to have access to the written part of the book. These laminate sheets can be purchased at an office supply store and can easily be placed in a braille writer or slate and stylus for transcription. The weight of the laminate sheets often determines the durability and readability of the braille. Once the words are transcribed, the strips of braille text can be cut and placed directly on, above, or below the printed text. Laminated sheets cut easily and have a self-adhesive backing that adheres well to the printed page.

To locate a braille transcriber, you can contact the National Library Service for the Blind and Physically Handicapped; The Library of Congress Braille Development Section, at 1-800-424-8567 or access the website; www.loc.gov/nls/references/directories/index.html for a listing of certified braille



Enjoy the out-of-doors together with a
CycleTote® Special Needs
 Trailer/Stroller
 1-800-747-2407 www.CycleTote.com
 Satisfaction Guarantee/Lifetime Warranty

List of braille-related Websites

- <http://www.afb.org>
(American Foundation for the Blind)
- <http://www.nfb.org> (National Federation of the Blind)
- <http://www.hotbraille.org> (Hotbraille)
- <http://www.brl.org>
(Braille Through Remote Learning)
- <http://www.brailier.com/mobrl.htm>
(Braille on the Web)
- <http://www.hadley-school.org>
(Hadley School for the Blind)

Producers Database (AMPdb) listing at www.aph.org/ampdb.htm, and the free download of Individual Braille Transcription Services at www.nbp.org/freebies.html.

Once the books are completed, they can be donated to individual students, local school systems, agencies for the blind, or schools for the blind. Many local school systems have a special education office which can be contacted directly. A listing of local agencies and schools for the blind can be found through the American Foundation for the Blind by logging onto their website at www.afb.org.

The creation of a print-braille book provides wonderful accessibility to quality literature for a child with a visual impairment or blindness. By virtue of its creation, such projects also provide, the sponsoring group with the ability to think about how a child who is blind

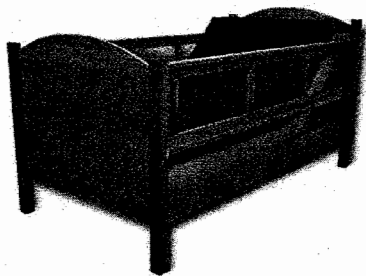
Recipe for Brailleing a Print-Braille Book

- Choose a book
- Decide on pictures that should be represented tactually
- Gather materials
- Braille; affix laminate to print pages
- Proofread
- Enjoy!

can access similar information as his sighted friends. This process enables the braille-print book creator to think about what a child who is blind requires in order to access similar information as a sighted child. A truly valuable experience for everyone! ☐

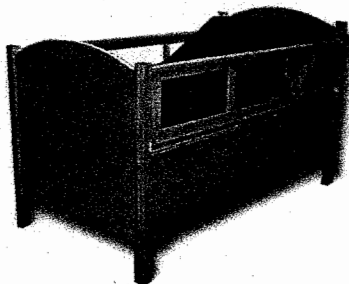
transcribers in your geographic region, found in the section "Sources of Custom-Produced Books." Other online sources for transcribers are the Accessible Media

You both will rest easier with SleepSafe™ Beds!



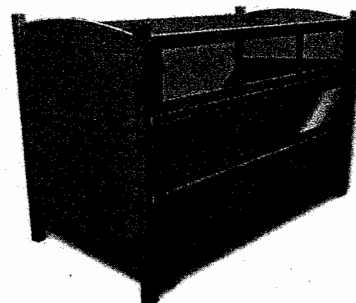
SleepSafeplus™

- Meets or exceeds bed safety standards. Remote control articulation.
- Mission style design in maple or red oak
- Select full-length safety rails or partial-length, hinged safety rails.
- Virtually eliminates the gaps between the bed sides and the mattress, reducing the chance for entrapment.



SleepSafeIIplus™

- Meets or exceeds bed safety standards. Remote control articulation.
- Combines mattress adjustability of the SleepSafer with the design of the SleepSafe.
- Virtually eliminates the gaps between the bed sides and the mattress to reduce entrapment.
- Adaptive safety rails with clear, acrylic panels provide user with a safe sleeping environment.



SleepSaferplus™

- Meets or exceeds bed safety standards. Designed to keep active sleepers safe
- Full remote control articulation.
- Mattress height can be adjusted to adapt to the sleeping needs of the user.
- Virtually eliminates the gaps between the headboard and the mattress.
- Double tiered safety rails remove individually.

www.sleepsafebed.com / Toll Free: 866-852-2337 / Made in USA

Above SleepSafe Bed models may also accommodate standard box springs & mattresses, sold separately. Visa, MasterCard, and purchase orders accepted.

Creating and Using Tactile Experience Books for Young Children With Visual Impairments

Sandra Lewis

Joan Tolla

What do very young children learn about reading? According to many studies on developmental learning (see box, "What Does the Literature Say?"), young children develop an appreciation that "reading" activities in which they engage are related to the words they speak and hear, and are further connected to the written symbols of our language. They observe others reading and writing within functional contexts and meaningful activities. Further, they develop important basic concepts about reading materials (see box, "Book Concepts").

But what about children whose vision is limited, or children who are blind? How do they participate in early reading activities? This article explores ways that educators, parents, and caregivers can ensure that *all* young children have a chance to learn to read.

Literacy Needs of Children With Visual Impairments

Obtaining access to the written symbols of language and observing adults and peers modeling reading and writing are not easily achieved for children with

significant visual impairments. Visual impairment can directly interfere with the observation of symbols and events that are key to the development of early literacy skills. Many educators and researchers have discussed ways to purposefully introduce these young children to Braille and print and to inform

them of reading and writing activities of others (Harley et al., 1997; Swenson, 1999; Wormsley, 1997).

An even more significant issue related to emergent literacy for young children with visual impairments is the development of meaningful concepts through essential life experiences



A teacher helps a student "read" her tactile experience book.

What Does the Literature Say About Learning to Read?

Developmental Reading Process.

Learning to read is a developmental process that begins at birth (Lamb, 1995; Rex, Koenig, Wormsley, & Baker, 1994; Snow, Burns, & Griffin, 1998), one that can be positively influenced by the involvement of parents and other caretakers.

Recommendations for facilitating the early literacy experiences of young children include the following:

- Providing a print-rich environment (Clay, 1991; Handel, 1999; Purcell-Gates, 2000; Sawyer & Comer, 1996).
- Modeling reading behavior (Handel, 1999; Purcell-Gates, 2000; Sawyer & Comer, 1996).
- Reading aloud to even the youngest infants and toddlers (Anderson, Hiebert, Scott, & Wilkinson, 1985; Purcell-Gates, 2000; Sawyer & Comer, 1996).

In fact, *being read to may be the most important factor in preparing a child to become a good reader* (Anderson et al., 1985).

Emergent Literacy. The phase of reading development during which infants and toddlers begin to become familiar with written language and the process of learning to read and write is known as *emergent literacy* (Harley, Truan, & Sanford, 1997; Wormsley, 1997).

(Finello, Hanson, & Kekelis, 1992). Because children with visual impairments are restricted in their frequent, spontaneous, incidental access to the things and events in their world, their information about these items is limited, inconsistent, or fragmented (Ferrell, 1997).

In addition, a key learning characteristic of children with visual impairments is learning from part to whole. Because their perception is limited to what can be felt by the hand or seen within a limited visual field, children with visual impairments often have difficulty understanding the “gestalt” of an experience (Ferrell, 2000). A sighted child

In emergent literacy activities, children develop an appreciation that the activities in which they engage are related to the words they speak and hear, and they are further connected to the written symbols of our language.

can frequently observe from a distance all of the objects that are stored in the desk drawer, are pulled out of the cabinet to wash the car, or are associated with a bath; but the child with visual impairment may not have had the same experiences or understanding. As a result, many children with visual impairments do not bring to the emergent literacy process the same kind and quality of information that young children with good vision do. Children with visual impairments may not understand what others read to them and what they are expected to read themselves (Koenig & Farrenkopf, 1997).

Illustrations in Books for Young Readers

Children with typical vision have an added advantage in the process of learning to read over young children who are blind or who have significant visual impairment. Sighted children can learn about things even if they have had no direct contact with them—animals, events, people, and objects—except through the illustrations in their books. The thousands of books published for emergent readers almost always include

Because children with visual impairments are restricted in their frequent, spontaneous, incidental access to the things and events in their world, their information about these items is limited, inconsistent, or fragmented.

Book Concepts

1. Books are generally made of paper, but may also be made of other materials such as cloth or plastic.
2. Books contain pages to be turned one at a time; pages are numbered.
3. Books may have pictures and words written on the pages.
4. Pictures resemble familiar objects.
5. Pictures and books have a top and bottom, front and back.
6. Books give information and pleasure.
7. Language is constant on each page.
8. Language can be remembered and related to specific pages or pictures.
9. Information presented in books stimulates the child’s own related ideas.
10. Printed symbols tell the reader what to say.
11. Printed symbols are read from left to right and from top to bottom.

Source: Adapted from *Communication skills for visually impaired learners* (2nd ed.), by R. K. Harley, M. B. Truan, & L. D. Sanford, Springfield, IL: Charles C Thomas, 1997.

illustrations or pictures. These illustrations not only introduce children to information with which they may be unfamiliar, but these pictures facilitate understanding of the text. “Illustrations play a major role in enriching the story line, adding humor and intrigue, giving instant clues to what the story is about and enabling the reader to reconstruct the story line (often without reference to the text)” (Lamb, 1995, p. 7).

Illustrations also provide the bridge between listening and early reading behaviors (see box, “Early Reading Behaviors”). Children only gradually become aware of the text. At first, they use the illustrations as prompts to recall the meaning and words of the story.

Tactile Illustrations

For young children who are blind or who have severe visual impairments,

Early Reading Behaviors

- Child enjoys listening to story.
- Child talks about the pictures.
- Child completes familiar lines in story based on memory.
- Child uses physical and visual cues surrounding print to make up story.
- Child pretends to “read” story-books; may run finger along printed text.
- Child associates some letters with their representative sounds.
- Child recognizes key words in familiar stories.

the visual aspects of books written for emergent readers present a significant problem. The obvious solution to this accessibility issue is the use of raised line drawings in conjunction with Braille text. Interpretation of raised line drawings, however, is a far more difficult task than is recognition and identification of pictures. Raised line drawings attempt to present the 3-dimensional world in two dimensions. Although we can visually see the relationship, a circle is really very unlike the way a ball feels; the outline of a birthday cake bears no resemblance to its tactile reality. Similarly, the outline of the “Cat in the Hat” holding a fish cannot be easily related to the outline of the Cat sitting in a chair. The details and constancy that make even abstract illustrations so identifiable visually cannot be reproduced in a tactile form.

Another solution that frequently has been recommended is to create “story boxes” (Newbold, 2000), or “book bags” (Miller, 1985; Stratton & Wright, 1991; Wormsley, 1997). These items are similar in that objects related to either a published or unpublished story are used as illustrative props to bring meaning to the story. Miller, the mother of a child who is blind, first described her creative use of book bags, in which she stored

objects mentioned in commercially published books. Miller and her children dramatized events in the stories they read using these objects. Others have recommended keeping the objects in a bag or a box, to stimulate recognition and discussion as they are handled and explored by the young child with visual impairment as the adult reads (Stratton & Wright, 1991; Wormsley, 1997).

Newbold’s (2000) story boxes were designed to address the problems young children with visual impairments often have in relating their experiences to the act of reading. She recommended that simple stories about a child’s experiences be written on note cards and included in a box with mementos from the event. The adult and child examine the objects together as the adult reads the story, which incorporates people and events that are familiar to the child.

Neither book bags nor story boxes address the need, for children who are blind, to be exposed to books on which the text and the objects or activities described by that text are presented on the same page. “Tactile experience books” can meet this need. In tactile experience books, artifacts from an event experienced by the child are actually incorporated onto the pages of a simple, sturdy book. Each page also includes Braille and print text. Adults using these books with young children can encourage the association of words that are read with Braille and the use of appropriate hand movements during story reading. Children can use these books independently; they can turn to a page, tactually explore the artifact attached to the page, and pretend to read the story aloud. Children with more experiences with these types of books can begin to recognize specific words based on their length, position in the text, or the letters with which they start or end.

Making Tactile Experience Books

Selecting topics for tactile experience books is as easy as examining the objects that are part of the environments in which students with visual impairments spend time. Events can be planned specifically to collect artifacts

“Illustrations play a major role in enriching the story line, adding humor and intrigue, giving instant clues to what the story is about and enabling the reader to reconstruct the story line.”

for a book, or artifacts can be collected as part of a naturally occurring event, such as a trip to a baseball game or an investigation of the school grounds. Ideally, the child participates in these collection activities, collecting and putting aside the objects to be used later in the book.

Regardless of the child’s involvement in his or her collection, artifacts must be items with which the child has come in contact tactually. Using car keys to represent going for a ride will not be appropriate unless the child has in some way used the keys, perhaps to unlock the car door. Using objects that the adult associates with an event, but which are unfamiliar to the child, is a common mistake of inexperienced bookmakers. In addition, artifacts used in the book must be real—not miniature representations of an object. Miniatures do not provide the same detail for the tactual learner that they provide to the visual learner. Thinking again of representing a ride in a car, a toy car would not be an appropriate artifact, unless perhaps, the child played with the toy car during the ride. In general, a toy car is very different from the car experience of a child who is blind or who has low vision. A better representative object might be a swatch of fabric from the child’s car seat or the seat belt buckle that the child has helped to fasten.

Preferred books are those that are easily handled by the child. Heavy cardboard should be used for the cover and pages, which should be securely fastened. We have found that metal rings are more durable than ribbon or string used to bind the pages. It is best for only one object (or category of object) to be placed on the page. Because an object that has been glued to the page creates a different experience than the same

Being read to may be the most important factor in preparing a child to become a good reader.

Some teachers and parents create “story boxes” and “book bags” filled with tactual objects related to a story.

object held in the hand, we recommend that artifacts be affixed to the pages using loop fasteners (Velcro®) whenever possible, so that the child can experience them in three dimensions. Another way to assure that objects can be fully accessed by the child is to store them in Zip-lock bags that have been glued or stapled to the page. Large objects, which can add bulk to the book and make it unmanageable by small hands, can be attached by a string to a particular page and stored outside of the pages, to be pulled nearer by the child when that page is read.

Another method of incorporating a large object, such as the big bow from a birthday present, is to place the item on the cover. The child can use this artifact to identify the book and distinguish it from others in his or her collection. Covers don't need to be fancy. Although it is visually meaningful to have a book about Jim's trip on the city bus cut out in the shape of a bus, this shape doesn't provide the same stimulus for the student with visual impairment. Keeping the transfer pass that the driver handed to the child as he or she boarded the bus and gluing it to the cover would be a more meaningful reminder of the trip.

Sighted children can easily identify the location of the text on the page, so its placement is not critical. The young reader who is blind is helped if the text can be found at a predictable location on the page. The Braille text should be created on heavy Braille paper in one continuous line. Words should not be cut apart and placed on the page as single units or phrases. The page of text should not be pasted to the page, since the adhesive can reduce the sharpness of the Braille dots. We recommend stapling the text to the page, using Brailleables®, or gluing only the edges and corners of the page on which the text is Brailled. Note: For many young children with visual impairments, the

decision regarding use of Braille or print for instruction has not been made. Therefore, it makes sense to include high-quality print versions of the text as well. The print can be created with a word processor on the page before the Braille is affixed. Even for children who are blind, print included on the page will help parents, peers, and others share in reading the story.

Determination of whether the Braille text should be created in alphabetic Braille (where the Braille matches the print exactly) or in Grade II Braille (the format of Braille used in commercially published materials, including school-books) is based on many factors. The parents, early interventionist, and teacher of students with visual impairments, if one has been assigned, should make this decision jointly.

Books published for young children with vision feature text that is simple and often repetitive. This repetition helps the emerging reader to memorize the text, so that attention can be placed on correspondence between the text and spoken words. This same practice can be used in tactile experience books published for children with visual impairments. Though it is tempting to write long descriptive passages, young children benefit when there are few words on the page. They also benefit when phrases are repeated, such as “In my bathroom, there is a _____,” or “When we fixed the doorknob, we used _____.”

Mary's Tactile Experience Book

Mary, who is totally deaf and blind, is in kindergarten in her local school district. A team of educators, including the second author, Joan, who is an orientation and mobility (O&M) specialist, provide support services to Mary. O&M specialists generally work on development of skills associated with travel, including use of the cane, body image, spatial concepts, sensory perception, and environmental-recognition skills. Joan decided that an “experience book” would be an ideal vehicle for reinforcing concepts of travel with Mary and approached the speech-language pathologist serving this student about working together on the project.

The two adults met with Mary and her interpreter in the school's courtyard garden and explored the area, which included flowers, trees, a gazebo, and even rabbits. Since Mary was unfamiliar with any garden, questions such as “What do you think might be in a garden?” were not helpful. Therefore, the adults asked Mary to move around the garden and look for items to the left or right, on the ground, or up high. As they explored, they discovered various natural items that were appropriate for an experience book; Mary picked these up and placed them in a large bag.

Joan then prepared the simple lines of the story in Braille and print. During their next meeting, Mary assisted Joan in the assembly of the book. The process went slowly as Mary explored each garden item, used sign language to identify it, and helped position it on the page. Mary affixed the items with tape; later, Joan prepared more permanent mountings. Joan arranged short Braille sentences at the bottom of each page. The last page was left for Mary and Joan to work on together (see box, “My Garden Walk” by Mary). Mary not only chose the words for this page, but also assisted in writing the sentences on the Braillewriter.

At first, the book was kept in a resource room and left on a bookshelf so that Mary could easily retrieve it independently. Mary loved her book and read and explored the pages often, fingering the artifacts. Later, the general education classroom teacher asked to keep the book in her classroom, so that Mary could read it during the class's independent reading time. Not surprisingly, the other kindergarten students also found the tactile experience book to be interesting; and they enjoyed sharing reading time with Mary and her book. The classroom teacher soon requested more books. Peers and adults have been encouraged to read the books aloud only when Mary is moving one

Tactile experience books can improve children's motor skills, social skills, and life skills.



"My Garden Walk" by Mary

Title cover: "My Garden Walk" by Mary: *Glued to the center of the cover page were several pebbles from the path on which Mary had walked.*

Page 1: Brailled sentence at the bottom of the page read. "I went for a walk in the school garden. I found 1 piece of tree bark." *Glued to the center of the page was a large piece of tree bark.*

Page 2: Brailled sentence "On the ground were 3 stones. Count them with me." *3 stones, one small, medium, and large, were glued onto this page.*

Page 3: Braille sentence, "I have 4 limbs from a tree." *Arranged in increasing size were 4 limbs from various trees.*

Page 4: Brailled sentence, "I picked 3 leaves, one large, one medium, and one small." *In descending size, three different leaves were glued onto the center of the page.*

Page 5: Brailled sentence, "I petted one bunny rabbit." *In a plastic Zip-lock bag glued to the center of the page was bunny fur found on the ground near the bunny's cage.*

Page 6: Brailled sentence, "I picked a flower." *One flower from a bush was attached to the center of the page.*

Page 7: Brailled sentence, "I had fun walking with Ms. Joan." *Stapled to this page was the elastic from the handle of a discarded cane like the one used by Mary.*

hand across the Braille while her interpreter signs the words into her other hand.

Other Tactile Experience Books

Peers have also been involved in the tactile experience books enjoyed by other students on Joan's caseload. One of the favorites is a book titled, "Things for My Hair" (see box). This book consists of 10 pages with large items attached with Velcro for easy removal and replacement and small items placed in Zip-lock bags. Even though the young students with visual impairments did not participate in making this book, they have enjoyed putting bobby pins, bows, clips, and scrunchies in their own hair, as well as into the hair of their peers and teachers.

Another creative teacher, Alysa Crooke of Pensacola, Florida, also used a hair theme to describe a field trip taken by one of her students to a local beauty parlor (see box, "Chloe's Makeover"). The following are two other books we have seen:

- *My Bathroom*—Repeated at the bottom of each page of this book is the text, "In my bathroom there is...." The artifacts included were soap,

toothbrush, dental floss, trial size toothpaste, Q-tips, comb, ponytail holder, and a small piece of washcloth.

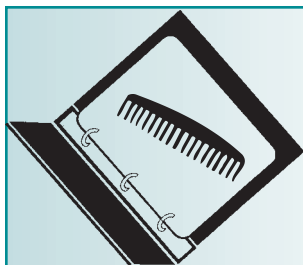
- *Things in Mommy's Purse*—This book was stored in a large straw purse. It consisted of 7 pages, and all items were removable for easy exploration

and manipulation. Objects included compact case, comb, small spiral notepad, credit card, pen, lipstick, and Velcro-closed wallet in which coins and a dollar bill had been placed. The text on each page read, "I looked in Mommy's purse and found...."

Benefits

Tactile experience books offer a host of benefits to students with visual impairments. Because they describe personal experiences, children request that they be read, memorize their content with ease, and are eager to pretend to read them aloud to listening adults. Early book skills are mastered, grapheme-phoneme connections are initiated, and the pleasure of reading with adults and peers is reinforced.

Tactile experience books also can be used to present children with visual impairments opportunities to practice other important skills, including those in the motor domain. One 2-year-old who is totally blind learned the difficult skill of opening a paper bag and placing an item in it on a windy day. Almost all of the young students with whom we have used tactile experience books have learned how to open and close Zip-lock bags, skills to which they previously had not been introduced. For many others, further fine motor practice has been



Things for My Hair

Title Cover: "Things for My Hair" *A hairbrush was attached to cover with Velcro.*

Page 1: "Shampoo to clean my hair. Conditioner to make it soft." *Small travel-size containers filled with a little shampoo/conditioner attached at the center of the page with Velcro.*

Page 2: "A brush and combs for my hair." *Two combs and one small brush were attached to the page with Velcro. A large brush was attached to a string and hung outside of the book.*

Page 3: "Hair rollers to help curl my hair." *Various sizes and makes of rollers were placed into a small plastic bag. The bag was fastened at the top of the page with Velcro.*

Page 4: "Large and small barrettes hold my hair in place." *Various sizes and types of barrettes were placed in a bag, and the bag was fastened at the top of the page with Velcro.*

Page 5: "Bobby pins hold my hair in place." *Large, small, and medium-size bobby pins were placed in a bag that was attached to the page.*

Page 6: "Ponytail holders keep my hair in a ponytail." *Same as pages 4 and 5.*

Page 7: "Clincher combs keep my hair back." *Same as pages 4 and 5.*

Page 8: "Headbands keep my hair out of my face." *Same as pages 4 and 5.*

Chloe's Makeover

Ms. Margaret called Chloe and said,
"Please come over,
I have time today to give you a
makeover."

Chloe was excited. She started to
squirm.
She had to wait on a lady getting a
perm.

"Let's use a comb to comb your
hair nice.
Let's use a pick. We'll comb your
hair twice."

Ms. Margaret said, "I know. Let's
give your hair curls.
This hairstyle looks wonderful on
little girls."

"Which barrettes would you like to
wear?
You have good taste. They look
great in your hair."

Next, Chloe got her nails painted
and filed.

Ms. Margaret said, "Beautiful."
Chloe just smiled.

Chloe was good, so she got a
treat . . .
A butter rum sucker, she was happy
to eat.

Ms. Margaret said, "You're done.
It's time to pay."
"Thank you, Ms. Margaret. I had
such fun today."

provided in removing items from strong Velcro, from fastening barrettes in the hair of their friends, and from turning open the cap on a tube of toothpaste. Although seemingly very rudimentary, these are exactly the kinds of skills that adults assume young children with visual impairments are learning, and are surprised that they do not have when they enter school.

Similarly, tactile experience books can be used to reinforce spatial, temporal, and number concepts. They can facilitate meaningful expansion of lan-

guage, social skills, and tactual perception.

As we described the creation and use of tactile experience books to parents of children with significant visual impairments, we found that many parents are surprised to think that their children might be unfamiliar with common items found in their home, how these items are used, and how they compare with one another. We have used these discussions as opportunities to help parents better understand the impact of visual impairment on development and learning, and consequently, to appreciate the critical importance of actively involving children in the simple events that occur around them.

Cautions

Although tactile experience books seem simple to make, their creation requires both time and careful planning, especially if the child is involved in the collection of the artifacts and the making of the book. Breaking the task into several components is recommended to maintain the interest of the young child.

The parents and general education teachers who have worked with us have not been enthusiastic about including artifacts that can cause a mess, such as shampoo, toothpaste, or lipstick. Although we tend to favor these kinds of artifacts because students with visual impairments have such few opportunities to experience them in other contexts, we recognize the potential problem. In the purse story described previously, it was decided to substitute clear lip-gloss for the lipstick after a teacher complained of the messy students. Putting only small portions of liquid in containers is one solution to the problem, so that any spill that is created is small enough to easily clean (by the student, we would hope).

*In tactile experience books,
artifacts from an event
experienced by the child are
actually incorporated onto the
pages of a simple, sturdy book.*

Finally, the objects included in books for very young readers must not present a choking hazard should they be put in the child's mouth. For infants and very young children, adult supervision when independently reading some tactile experience books may be necessary.

Final Thoughts

Tactile experience books can support the emergent literacy development of young children with visual impairments in a variety of ways. When tactile experience books are made available to early readers, these students practice

- Turning pages.
- Orienting books.
- Exploring objects.
- Using the hand movements associated with Braille.
- Experiencing independent pleasure reading.

At the same time, these children have the opportunity to see the connection between words that describe the activities in which they engage and the stories that they read—a key prerequisite for reading. They also gain experiences with writing and the symbols of the written language that they will be using in school.

We have also seen how tactile experience books support the social inclusion of preschool children with visual impairments in their general education classrooms. Children with visual impairments have meaningful stories from which to choose during reading time, and can share these stories with others, both as a competent "reader" and as a listener.

Lamb (1995) observed that students with visual impairment do not experience the same immersion in literature that children with vision do. Swenson (1999) agreed, noting that "because of the scarcity of Braille materials, children who are blind or have very low vision...do not automatically participate in...[early] literacy learning. Instead, their 'Braille immersion' must be deliberately orchestrated by teachers and parents" (p. 11). The addition of tactile experience books to the bookshelves of young children with visual impairments is an important "instrument" of that orchestration.

References

- Anderson, R. D., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. (1985). *Becoming a nation of readers: The report of the Commission on Reading*. Washington, DC: National Academy of Education, National Institute of Education.
- Clay, M. M. (1991). *Becoming literate: The construction of inner control*. Birkenhead, Auckland, New Zealand: Heinemann Education.*
- Ferrell, K. A. (1997). Preface. What is it that is different about a child with blindness or visual impairment? In P. Crane, D. Cuthbertson, K. A. Kerrell, & H. Scherb (Eds.), *Equals in partnership. Basic rights for families of children with blindness or visual impairment* (pp. v-vii). Watertown, MA: Perkins School for the Blind and the National Association for Parents of the Visually Impaired.
- Ferrell, K. A. (2000). Growth and development of young children. In M. C. Holbrook & A. J. Koenig (Eds.), *Foundations of education* (2nd ed.). *Volume 1: History and theory of teaching children and youths with visual impairments* (pp. 111-134). New York: AFB Press.
- Finello, K. M., Hanson, N. H., & Kekelis, L. S. (1992). Cognitive focus: Developing cognition, concepts, and language in young blind and visually impaired children. In R. L. Pogrund, D. L. Fazzi, & J. S. Lampert (Eds.), *Early focus: Working with young blind and visually impaired children and their families* (pp. 34-49). New York: American Foundation for the Blind.*
- Handel, R. D. (1999). *Building family literacy in an urban community*. New York: New York Teachers College Press.
- Harley, R. K., Truan, M. B., & Sanford, L. D. (1997). *Communication skills for visually impaired learners: Braille, print, and listening skills for students who are visually impaired* (2nd ed.). Springfield, IL: Charles C Thomas.
- Koenig, A. J., & Farrenkopf, C. (1997). Essential experience to undergird the early development of literacy. *Journal of Visual Impairment and Blindness*, 91(1), 14-24.
- Lamb, G. (1995). *Fingerprints: A whole language approach to Braille literacy*. Manurewa, Auckland, NZ: Homal Vision Education Centre.
- Miller, D. D. (1985). Reading comes naturally: A mother and her blind child's experiences. *Journal of Visual Impairment and Blindness*, 79(1), 1-4.
- Newbold, S. (2000). *Emergent literacy for young blind children*. Phoenix, AZ: FBC Publications.
- Purcell-Gates, V. (2000). Family literacy. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research, Volume III* (pp. 853-870). Mahwah, NJ: Lawrence Erlbaum.
- Rex, E. J., Koenig, A. J., Wormsley, D. P., & Baker, R. L. (1994). *Foundations of Braille literacy*. New York: AFB Press.
- Sawyer, W. E., & Comer, D. E. (1996). *Growing up with literature*. Albany, NY: Delmar.
- Snow, C. F., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stratton, J. M., & Wright, S. (1991). *On the way to literacy: Early experiences for visually impaired children*. Louisville, KY: American Printing House for the Blind.
- Swenson, A. M. (1999). *Beginning with Braille: Firsthand experiences with a balanced approach to literacy*. New York: AFB Press.
- Wormsley, D. P. (1997). Fostering emergent literacy. In D. P. Wormsley & F. M. D'Andrea (Eds.), *Instructional strategies for Braille literacy* (pp.17-55). New York: AFB Press.

BooksNow

To order the book marked by an asterisk (), please call 24 hrs/365 days: 1800-BOOKS-NOW (266-5766) or (732) 728-1040; or visit them on the Web at <http://www.clicksmart.com/teaching/>. Use VISA, M/C, AMEX, or Discover or send check or money order + \$4.95 S&H (\$2.50 each add'l item) to: Clicksmart, 400 Morris Avenue, Long Branch, NJ 07740; (732) 728-1040 or FAX (732) 728-7080.

Sandra Lewis (CEC Chapter #311), Associate Professor and Coordinator, Program in Visual Impairment, College of Education, Florida State University, Tallahassee. **Joan Tolla**, Orientation and Mobility Specialist, Tift and Irwin County Schools, Georgia.

Address correspondence to Sandra Lewis, Associate Professor, Department of Special Education and Rehabilitation Counseling Services, Florida State University, 205 Stone Building, Tallahassee, FL 32306-4459 (e-mail: lewis@coe.fsu.edu).

TEACHING Exceptional Children, Vol. 35, No. 3, pp. 22-28.

Copyright 2003 CEC.



Ideas to Promote Braille Awareness and Literacy

Children need to be exposed to braille in a functional and fun way. Here are just a few ideas...

- Parents and teachers should share what they are writing (e.g., grocery list, note home) and read aloud as they do so. Let children know how and why you use print (or braille).
- Provide the child with lots of activities to use the hands and build tactile awareness and strength (e.g., play dough, shaving cream, opening jar lids, playing a keyboard).
- Braille notes for the child and "hide" in lunchbox, desk, etc. for the child to find and "read" (include print on the note so the child can get assistance in "reading" the note).
- Provide braille writer and a slate and stylus for the child to experiment with and write notes with. Don't worry about mechanics or true reading...these will come later.
- Point out braille in the community (e.g., elevators, signs) and ask for braille menus in restaurants (When appropriate, have the child do the asking!).
- Label things that are important to the child (e.g., cubby in classroom, book covers, food containers).
- Make experience books with the child using activities and materials that are meaningful to him/her (e.g., bath time, trip to Grandma's, going to the park).
- Make sure the child has access to books – place on a low shelf. Label books for the child so he/she can identify the book sought.
- Make story boxes for favorite commercial books (a box or bag of materials that correspond to the story) and spend time sharing the materials as you read the book to the child.
- Take the child to the public library for "story hour". Many libraries use a variety of hands-on materials during story hour and most librarians are glad to work with parents to meet the challenge of a tactile learner!
- Use the plastic sheets that come with bacon to write braille on for books.

Beginning Braille Competencies

The following competencies do not have to be accomplished before kindergarten. Each child is unique in his development and readiness level. Literacy skills will progress according to a child's language development, concept formation, interest-motivation, and fine motor discrimination abilities. The braille reading/writing skills that he or she learns will provide the added exposure that many sighted children possess upon entering kindergarten. More specifically, the young student will have the opportunity to use braille-producing tools and begin processing the complexities of the braille code prior to kindergarten.

The following competencies are **not** in sequential order. A certified teacher of students with visual impairments will determine the sequence and combination of instructional skills necessary for each student's optimal progress.

1. Tracks smoothly across three to eight lines of double spaced braille.
2. Finds beginning and end of a braille line.
3. Locates long and short horizontal and vertical braille lines.
4. Locates braille symbol that is different in a line of braille.
5. Locates braille symbol that is the same in a line of braille.
6. Discriminates two braille symbols to determine if they are the same or different.
7. Matches and sorts braille symbols (letters, numbers, whole word contractions).
8. Demonstrates organization of braille cell using a variety of materials (golf balls, marbles, pegs.)
 - a. Copying six piece configuration
 - b. Copying by demonstrating "dot" system
9. Transfers skill #8 to the six keys on the braille writer.
10. Pushes each key separately and in combination with other keys.
11. Reads and writes numbers 0 – 10 in braille using number sign.
12. Reads and writes some letters of the alphabet in braille.

Beginning Braille Competencies, continued

- 13 Reads and writes simple whole word contractions (go, like).
14. Reads and writes first and last name.
15. Discriminates own name from other dissimilar names in braille.
16. Attempts to "read" or follow along when an adult reads a print/braille book.
17. Inserts and removes paper in braille writer.
18. Locates all parts of the braille writer when named.
19. Demonstrates use of all parts of braille writer when asked.
20. Locates, removes and replaces push pin in cork board to complete teacher directed task.
 - a. Uses pencil/crayon to mark correct response.
21. Moves beads on abacus for counting purposes.
22. Dictates and co-actively writes simple language experience phrases for developing a book or weekly news notes.
23. Rhymes words for building simple word families.
24. Sorts tactual objects according to their beginning sounds.
25. Begins *Patterns* pre-primer.
26. Begins *Mangold* program.
27. "Scribble writes" using a slate and stylus.
28. Exposed to technology.

Newbold, S. (2000). *Emergent literacy for young blind children*. Phoenix, AZ: Foundation for Blind Children, pp. 43-46.

Module: **Communication and Emergent Literacy:
Early Intervention Issues**

Session 5: Interventions to Facilitate Emergent Literacy

Handout B: Emergent Literacy Skills for Future Braille Readers

This handout is adapted from the Braille Readiness Skills Grid (McComiskey, 1996). It is not essential for young children to obtain all of these skills in order to become successful braille readers and writers. However, these are skills that may make learning to read and write braille easier. Skills should not be taught in isolation, but within natural learning opportunities found in children's daily routines.

Tactile

- Tolerates being touched
- Examines objects by touch
- Matches and sorts objects
- Touches braille in exploration
- Matches graduation of sandpaper, etc.
- Locates tactile "mark" on paper
- Uses pad of index finger to touch
- Traces 2-dimensional outline of shape
- Traces 3-dimensional outline of shape

Fine motor

- Holds object in both hands
- Uses pincer grasp
- Opens and closes books
- Turns cardboard pages
- Uses two hands cooperatively
- Uses appropriate grasp with stylus
- Makes stylus art with construction paper
- Turns pages one at a time
- Scribbles on braillewriter or with slate and stylus

Listening and attention

- Alerts to sounds
- Listens to verbal interactions and songs
- Sits socially with adult 5-10 minutes
- Listens to and enjoys rhymes

- Participates in finger plays and songs
- Follows two-step directions
- Matches sound cans
- Shows interest in short stories about self
- Shows interest in short stories about others, with participation
- Shows interest in stories about others, without participation
- Uses jargon and imitation on phone
- Tells simple events (ideas)
- Makes up simple stories
- Listens to simple story tapes

Concept

- Identifies body parts
- Names body parts
- Identifies objects and actions
- Names objects and actions
- Understands object permanence concept
- Searches for dropped objects
- Shows same and different concept awareness
- Plays symbolically

Book and story

- Uses books as toys (speak, pull, etc.)
- Identifies parts of a book (cover, pages, margin, etc.)
- Holds book and turns pages
- Explores tactile books using pad of fingers
- Purposefully traces marks in tactile book from start to end
- Participates in “object book” story
- Has daily twin-vision book lap time

McComiskey, A.V. (1996). The braille readiness skills grid: A guide to building a foundation for literacy. *Journal of Visual Impairment & Blindness*, 90(3), 190-193.

**Module: Communication and Emergent Literacy:
Early Intervention Issues**

Session 5: Interventions to Facilitate Emergent Literacy

HANDOUT C: Object Books

From www.tsbvi.edu

Before tactile learners are required to track lines or read dots, which may seem meaningless to them, they may benefit from "reading" books containing interesting objects.

What is an object book?

An object book is a book containing real objects. These objects should be taken from the student's activities and experiences so that they are meaningful. This is the first type of book that should be used to introduce tactile learners into the wonderful world of reading. Children will need countless opportunities to read a wide variety of object books before moving on to the more abstract levels of parts of objects, tactile symbols, and/or braille.

How do I create an object book?

The activity is much more effective when the child participates in making the books.

- Use a three-ring binder. Three-ring binders are preferable for several reasons—study pages such as posterboard or cardboard can be used, binders expand to fit the objects, the pages can be rearranged in a different order or used to create a different book.
- Collect items from the child's activities and experiences.
- Glue only one object per page at first—more can be added as the child's skills increase. A hot glue gun works best for attaching objects.
- Some of the object books will not last long due to the type of objects used. Therefore, don't spend a lot of time on the appearance of the book.
- Remember that these books are for tactual learners and don't necessarily need to be visually appealing. A one-word braille label can be added to each page to increase the child's exposure to braille.
- Put an object cue on the front of the book to serve as a title for children so that they can choose the book they want to read.

Additional ideas to use as the child's skills develop

- Glue envelopes or baggies to the pages and hide items inside for the child to find.
- Create collections of objects in a single category, such as kitchen utensils.
- When books become meaningful to the child, alphabet books and counting books can be created.

In addition to objects from the child's activities, you could use:

crayons	string	spoons	scissors
socks	flowers	candy	candles
money	combs	brushes	soap
napkins	cotton balls	paper clips	jewelry
small balls	keys	straws	Cheerios
toothbrushes	hair clips	rubber bands	cassettes
toys	gloves	ribbon	beads

Suggested ideas for object books

- Sensory walk: rocks, sticks, flowers, grass, leaves, bark, shells, gravel
- Making pudding: pudding box, wooden spoon, milk carton, paper towel
- Making trail mix: baggie, peanuts, raisin box, raisin, chocolate chips, dried fruit chips
- Trip to McDonalds: french fry box, hamburger wrapper, ketchup packet, drink lid, straw, napkin
- Bath routine: sliver of soap, washcloth, travel-size shampoo, lotion, bath toy, Q-Tips, cotton balls, comb
- Spoon book: wooden cooking spoon, plastic cooking spoon, slotted spoon, plastic coated spoon for cooking in Teflon pans, metal spoon, grapefruit spoon, teaspoon, stirring spoon, tablespoon, measuring spoons, disposable plastic spoon, baby spoon
- Candy book: M&M, chocolate kisses, gummy bears, licorice, Tootsie Rolls, suckers, peppermints
- Concept book: same and different, in and out, big and little objects

What does the student learn by reading these books?

- Reading can be fun and interesting.
- What I touch is meaningful.
- Objects represent an activity that I have done or will do.
- I can share what I did at school with my family, and activities I did at home with teachers and friends at school.
- I can find the front and back of my book.

- I can turn pages in my book.
- I can find out and explore what is on each page with my fingers.
- I can search the page to find the object, whether it is at the top, at the bottom, in the middle, on the left, or on the right.
- I can recall the sequence of events or steps of an activity.
- I can learn left-to-right sequence.
- I can "read" rows of objects.
- I can "read" my stories to others.
- I can have books—just like everyone else!

Next steps

Object exploration is the crucial first step in the development of the tactile discrimination skills that tactile learners will need. After achieving success with a wide variety of object books, teachers may begin to add more abstract components to the books. These might include parts of objects, tactile symbols, abstract representations (such as thermoformed pages of real objects, etc.) and braille content. Students may now be ready for tactile discrimination books and worksheets such as *Mangold's Program*, *Tactile Treasures*, and *On the Road to Literacy*.

Smith, M., Shafer, S., & Sewell, D. (July 30, 2002). Object books. Retrieved February 6, 2004, from <http://www.tsbvi.edu/Education/vmi/objectbook.htm>.

BRAILLE ALPHABET



Directions, place a piece of masking tape above each braille key. Put a different color on each piece. Color the alphabet below to correspond to the colors on the braille. Sighted children can then braille their names or other words using this color key.

	3	2	1	4	5	6
a	○	○	●	○	○	○
c	○	○	●	●	○	○
e	○	○	●	○	●	○
g	○	●	●	●	●	○
i	○	●	○	●	○	○
k	●	○	●	○	○	○
m	●	○	●	●	○	○
o	●	○	●	○	●	○
q	●	●	●	●	●	○
s	●	●	○	●	○	○
u	●	○	●	○	○	●
w	○	●	○	●	●	●
y	●	○	●	●	●	●

	3	2	1	4	5	6
b	○	●	●	○	○	○
d	○	○	●	●	●	○
f	○	●	●	●	○	○
h	○	●	●	○	●	○
j	○	●	○	●	●	○
l	●	●	●	○	○	○
n	●	○	●	●	●	○
p	●	●	●	●	○	○
r	●	●	●	○	●	○
t	●	●	○	●	●	○
v	●	●	●	○	○	●
x	●	○	●	●	○	●
z	●	○	●	○	●	●

BRAILLE ALPHABET

Directions, place a piece of masking tape above each braille key. Put a different color on each piece. Color the alphabet below to correspond to the colors on the braille. Sighted children can then braille their names or other words using this color key.

	3	2	1	4	5	6
a	○	○	○	○	○	○
c	○	○	○	○	○	○
e	○	○	○	○	○	○
g	○	○	○	○	○	○
i	○	○	○	○	○	○
k	○	○	○	○	○	○
m	○	○	○	○	○	○
o	○	○	○	○	○	○
q	○	○	○	○	○	○
s	○	○	○	○	○	○
u	○	○	○	○	○	○
w	○	○	○	○	○	○
y	○	○	○	○	○	○

	3	2	1	4	5	6
b	○	○	○	○	○	○
d	○	○	○	○	○	○
f	○	○	○	○	○	○
h	○	○	○	○	○	○
j	○	○	○	○	○	○
l	○	○	○	○	○	○
n	○	○	○	○	○	○
p	○	○	○	○	○	○
r	○	○	○	○	○	○
t	○	○	○	○	○	○
v	○	○	○	○	○	○
x	○	○	○	○	○	○
z	○	○	○	○	○	○



Learn beginning braille! Find out Who's Who!
Read stories about braille readers!
Fun and games for your entire family!

Dots for Families:

Ongoing Literacy for Families of Children
with Visual Impairments

Visit us online at

<http://uacoe.arizona.edu/vliteracy/>



Learn beginning braille! Find out Who's Who! Read
stories about braille readers!
Fun and games for your entire family!

Dots for Families:

Ongoing Literacy for Families of Children
with Visual Impairments

Visit us online at

<http://uacoe.arizona.edu/vliteracy/>



Resource List for Early Braille Literacy Materials

Assessment / Curriculum:

Koenig, A. J. & Farrenkopf, C. (1995). *Assessment of Braille Literacy Skills*. Houston, TX: Region IV Education Service Center.

The ABLIS has 3 assessment checklists including emergent literacy, academic literacy and functional literacy.

Overbrook School for the Blind. (2000). *Braille Literacy Curriculum*. Philadelphia: Towers Press.

This book combines information on assessment and instruction for children of varying ages and abilities. It has many useful suggestions for working with children in the emergent literacy stage.

Region IV Education Service Center. (2003). *Braille Requisite Skills Inventory*. Houston, TX: Author.

This assessment is used to determine if braille is an appropriate medium. It contains a skills checklist and instructional activities that allow for more in-depth assessment. Areas assessed include cognition and fine motor/tactical skills. The assessment is appropriate for preschoolers.

Books:

Collins, S. H. & Schneider. (1998). *Braille for the Sighted*. Eugene, OR: Garlic Press.

This is a short book designed for sighted elementary age students. It teaches the basics of braille with some fun activities.

Cucco, L. (1997). *The bridge to braille: reading and school success for the young blind child*. Baltimore: National Organization of Parents of Blind Children.

Families are provided an introduction to braille along with information on how their child will learn braille and use it in school.

Newbold, S. (2000). *Emergent literacy for young blind children*. Phoenix, AZ: Foundation for Blind Children.

This book contains suggestions for families, a pre-braille readiness checklist, story box ideas, and resources.

Swenson, A. (1999). *Beginning with braille: Firsthand experiences with a balanced approach to literacy*. New York: AFB Press.

This is a **must have** resource if you are teaching braille to preschool or early school age students. It has a wealth of information and many practical ideas.

Wormsley, D. P. & D'Andrea, F. M. (1997). *Instructional strategies for braille literacy*. New York: AFB Press.

This is a comprehensive book that examines many aspects of developing braille literacy. Information on teaching young braille readers is provided.

Book Chapters;

Koenig, A. J. (1996). Growing into literacy. In M. C. Holbrook (Ed.). *Children with visual impairments: A parents' guide* (pp. 227-255). Bethesda, MD: Woodbine House.

This chapter comes from an excellent book to share with families of visually impaired young children. Information about literacy options for low vision and blind children is presented along with many practical strategies families can use at home and in the community.

Koenig, A. J. & Holbrook, M. C. (2002). Literacy Focus: Developing skills and motivation for reading and writing. In R. L. Pogrund & D. L. Fazzi (Eds.). *Early focus: Working with young children who are blind or visually impaired and their families* (2nd ed., pp. 154-187). New York: AFB Press.

This chapter comes from an excellent resource for professionals in the vision or early intervention fields. The authors present an overview of early literacy and many specific suggestions for fostering the development of reading and writing skills for both children who are blind and those who have low vision.

Videos:

Elizabeth's Story (American Printing House for the Blind,
<http://www.aph.org>)

This family oriented video shows how Elizabeth, who is blind, develops literacy skills through infancy, preschool and into early elementary school.

Power at Your Fingertips: An Introduction to Learning Braille, (VIPS,
<http://www.vips.org/>)

Families are introduced to braille and see a variety of young children using braille. A notebook that has information about braille accompanies the video along with a slate and stylus. VIPS produces a series of videos appropriate for families of young children with visual impairments.

Understanding Braille Literacy (American Foundation for the Blind,
<http://www.afb.org>)

This video provides an overview of the braille code, early literacy development, along with literacy across the life span.

Learning Braille:

Just Enough to Know Better from National Braille Press
(<http://www.nbp.org>)

This book teaches the basics of braille through short lessons.

Companies:

American Printing House for the Blind
<http://www.aph.org>

On the Road to Literacy books, *Elizabeth's Story* video, braille writers, slate and styli, teaching aids, paper etc. Materials available on federal quota.

Exceptional Teaching Aids <http://www.exceptionalteaching.com/>

Producers of the *Mangold Developmental Program of Tactile Perception and Braille and Braille Letter Recognition* (also a number version) along with a variety of teaching aids and materials for tactile markings (e.g., Wikki Stiks).

National Braille Press <http://www.nbp.org/>

Books for both children and adults are available. A free book (available in both English and Spanish) called ***Because Books Matter*** is a resource to share with families. The ***Read Books Program*** provides families a tote bag that contains a braille book for their child, *Because Books Matter, Just Enough to Know Better* and other "goodies." These bags are free to families.

Seedlings Braille Books for Children <http://www.seedlings.org/>

Low-cost braille books for children beginning in infancy are provided by Seedlings. Popular titles are available that appeal to children and their families.

Online Resources and Professional Development



Webcasts

On-demand webcasts are presented by experts in the field of visual impairment and deafblindness. Whether your focus is professional or personal, you will find topics of interest, including social skills, assistive technology, and independent living skills. For more information go to:

www.perkins.org/resources/webcasts



Webinars

Broadcast live and for free, on an easy to use web conferencing platform. Ask questions and learn from experts in the field of visual impairment and deafblindness. If you miss the live broadcast, no problem! Streaming video will be ready to view any time within a few days of its original airing at:

www.perkins.org/resources/webinars



Paths to Literacy

A new website with interactive resources to assist educators and families in providing literacy experiences for children who are blind or visually impaired. Information includes an overview of literacy, ideas for children at various stages of development, and an exploration of different media: print, braille, and auditory strategies. For more information go to:

www.pathstoliteracy.org

Earn Professional Development Credits Today

Now you can earn continuing education credits (ACVREP, PDP's, etc.) simply by completing our Web tutorials. View a webcast or webinar at your own convenience, complete the test and print your certificate.

For more information: www.perkins.org/credits

Post a strategy to Paths to Literacy and earn two continuing education credits!

For more information: www.pathstoliteracy.org/strategies

More Educational Resources



Perkins Training Center

Resource for vision educators to find the extra tools they need for students. Customized in-service training, workshops, and special programs are designed to address the individual needs of educators in multiple settings.

www.perkins.org/resources/training-conferences



Scout

Information Clearinghouse on Blindness and Visual Impairment with a searchable list of carefully evaluated resources related to blindness and visual impairment. The range of topics includes general information on blindness, help for families with relatives who are visually impaired, and resources for educators and other professionals.

www.perkins.org/resources/scout



WonderBaby.org

Our site supports parents of children who are blind, as well as children with multiple disabilities. Read articles written by parents who want to share what they've learned about raising a child who is blind and find ways to connect with other families.

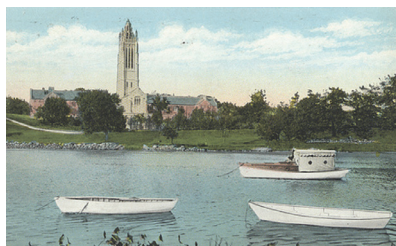
www.wonderbaby.org



Educator Series

Monthly e-newsletter and online archive of advice, activities, curriculum, webcasts and other information for teachers of the visually impaired (TVIs). Recurring columns include Cindy's Corner, Ask the Expert, and About the Authors.

www.perkins.org/resources/educator-series



Archives

Portal for archival collections related to the history of the school, blindness, the education of the blind and deafblind, institutional archives, correspondence, digitized photographs and historic texts, and Keller/Sullivan materials.

www.perkinsarchives.org

Perkins School for the Blind
175 North Beacon Street
Watertown, MA 02472

www.perkins.org

Betsy McGinnity
betsy.mcginny@perkins.org
617-972-7519 phone
617-972-7271 fax