The Nevada Dual Sensory Impairment Project aims to enhance the educational services provided to children and youth, birth through 21 years who have dual sensory impairments, by providing technical assistance to families and involved agencies.

Who are Children Who are Deafblind?
The Nevada Dual Sensory Impairment Project's Children
MaryAnn Demchak, Project Director

WHAT IS DEAFBLINDNESS?
According to the Individuals with Disabilities Education Act (IDEA) of 2004, deaf-blindness means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness. (Retrieved from http://idea.ed.gov/explore/view/p/2Croot%2Cregs%2C on March 13, 2007.)

When the term “deaf-blindness” is used, we often think immediately of someone who has no vision and no hearing. However, this perception is inaccurate because the term “deafblindness” actually includes those with varying degrees of vision and hearing losses. Table 1 shows the breakdown for Nevada’s children, birth through 21 year of age, who are currently involved with the Nevada Dual Sensory Impairment Project (NDSIP). An additional stereotype that often exists in terms of “deaf-blindness” is that individuals with this diagnosis are similar to Helen Keller in that their only impairments are in vision and hearing. However, nationwide the majority of children who are deafblind also have other disabilities (see Table 2 for Nevada’s data).

Table 1
Reported Degree of Vision Loss & Hearing Loss for the Children Involved with the NDSIP

<table>
<thead>
<tr>
<th>Vision Loss</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12% Low Vision</td>
<td></td>
</tr>
<tr>
<td>25% Legally Blind</td>
<td></td>
</tr>
<tr>
<td>24% Cortical Vision Impairment</td>
<td></td>
</tr>
<tr>
<td>18% Totally Blind &amp; Light Perception Only</td>
<td></td>
</tr>
<tr>
<td>21% Other (e.g., progressive loss, functional loss)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hearing Loss</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21% Mild Loss</td>
<td></td>
</tr>
<tr>
<td>14% Moderate Loss</td>
<td></td>
</tr>
<tr>
<td>14% Moderately Severe Loss</td>
<td></td>
</tr>
<tr>
<td>10% Severe Loss</td>
<td></td>
</tr>
<tr>
<td>8% Profound Loss</td>
<td></td>
</tr>
<tr>
<td>33% Other (e.g., progressive loss, auditory neuropathy)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2
Percentage of Children with Other Disabilities (for the NDSIP)

<table>
<thead>
<tr>
<th>Disability Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>82% Physical / Orthopedic Impairments</td>
<td></td>
</tr>
<tr>
<td>87% Cognitive Impairments</td>
<td></td>
</tr>
<tr>
<td>71% Complex Health Care Needs</td>
<td></td>
</tr>
<tr>
<td>11% Behavior Problems</td>
<td></td>
</tr>
<tr>
<td>87% Communication/Speech/ and/or Language Impairments</td>
<td></td>
</tr>
</tbody>
</table>

Why identify students as having impairments in both vision and hearing?
- Vision and hearing are the two primary senses by which we learn
- Appropriate identification of sensory impairments can assist educational professionals in appropriately planning to meet the student’s educational needs
- Specially designed instruction might be needed
- Adapted materials might be needed
- Corrective lenses and/or hearing aids might be needed
- Related / supplemental services might be needed (e.g., orientation & mobility, vision support or hearing support services)
- The child might be eligible to receive services from specialized projects (e.g., NDSIP, Helen Keller National Center).

Why refer students who have impairments in both vision and hearing to the Nevada Dual Sensory Impairment Project?
The project provides on-site technical assistance at no cost to the family or school district. This assistance can be in the form of student-specific consultations, training workshops, lending library materials / resources, and more. (Please see page 8 of this newsletter for a grid highlighting combinations of vision and hearing impairments that might be present for a child identified as deafblind.

Please visit this website for national data on children who are deafblind: http://www.nationaldb.org/TACount.php)
Fun Books for SHARED Reading

Patsy Pierce, Ph.D.
The Center for Literacy and Disability Studies,
The University of North Carolina at Chapel Hill

Shared reading is a technique that emphasizes conversation between a child and the reader about different aspects of the story. This powerful technique can account for at least 10% of the variance among reading and non-reading children (Ezell & Justice 2005). Good shared reading supports children to ask and answer questions and to make comments about each page of a book. Effective shared reading also includes readers who can ask appropriate questions, wait for answers, and who make comments and connections regarding the story and the print on each page to meaningful words and events in the child’s life (Ezell & Justice, 2005).

Shared reading is often difficult for children with disabilities due to the high level of language that is shared and expected during a conversation (Kaderavek & Sulzby, 1998). Appropriate scaffolding techniques used by the communication partner along with augmentative and alternative means for the child to participate are required (Dale, Crain-Thoreson, Notari-Svyerson, & Cole, 1996). Pierce and Erickson (2006) list several suggestions of appropriate interaction techniques (e.g., pausing, using gestures and pictures) to use with children with disabilities.

Interesting books may also facilitate longer engagement and enhanced participation during shared reading with children with disabilities. Building on children’s interests has been found to be an effective approach to enhance engagement and learning (Dunst, 2006). Children with disabilities may demonstrate typical topic-related interests (e.g., puppies, babies), but

Continued on page 3
may also demonstrate less topic-related and more sensory-related interests (e.g., sounds, vibration, textures). Family-members, teachers, and service providers may discover varying topic and/or sensory-related interests by observing children with disabilities in different settings and with different types of materials.

Through our observations made over several decades of working with children with significant disabilities, we discovered that children were more likely to interact with books and participate during shared reading if we made books out of materials that reflected the children’s sensory interests. We added text to the books related to the children, their friends, and their family interests. The following pages offer photos and descriptions of how to make some of the books that we have found children with significant disabilities to enjoy and explore during shared reading.

**Squishy Books**

Several children with cognitive, motor, and sensory impairments with whom we have worked, seemed to enjoy squeezing “squishy” materials such as play-dough, putty, and even their diapers. We used this interest to make “squishy books” to give the children appropriate options to explore their interests, to learn to turn pages, and to participate in shared reading. As children make comments, or adults could come up with simple phrases related to the pages in the book, these comments are written on “sticky-notes” and attached to each page and used as text.

**Directions to Make Squishy Books**

**Ingredients:**
- Several heavy-duty, freezer-quality, ziplock bags (1 quart size)
- “Squishy” materials such as alcohol-free hair gel (variety of colors), hand-lotion (with and without glitter), “gak” (water and corn starch with food coloring), vegetable oil and food coloring, sand, dirt, paper strips/packaging materials, etc.
- Small plastic letters, objects
- Clear packaging tape

Fill a ziplock bag (page) with something “squishy”. Before closing the bag, add small objects like plastic animals and plastic letters that might spell the name of the animal into the bag. Zip it shut. After filling several bags, tape the zippered-parts together with packaging tape to make a book. Usually 3-4 pages can be securely taped together.

**Variations on the theme:**

**Animal food books:** Pages filled with different types of animal foods, (e.g., dry dog food, dry cat food, bird seed, hay) and with the logo/label from the food container. You may have to use sample-size of the animal food to have the right size of the label/logo to put in the baggie with the food.

**Breakfast food books:** Pages filled with different types of cereal along with the label/logo from the box of cereal. It is helpful to use “snack-size” boxes of cereal in order to have the right size label to put in each bag. White paper strips could also be added as “milk” for the cereal. We found that puncturing the bags with a needle in several places help the pages to remain flat.

**Sand books:** Pages filled with sand, seashells, seahorses, and letters to spell these words. Children with visual impairments often seemed to interact more with these books when glitter was mixed with the sand.

**Dirt books:** Pages filled with potting soil, plastic insects, worms, and letters to spell related words.

**ABC book:** Pages filled with a plastic letter and small objects starting with that letter, (e.g., B, bug, baby, ball). The pages also have a fun substance in them like hair gel.

**Name book:** Each page has a plastic letter and items that begin with that letter from a child’s name, (e.g., P, pig, next page, A-ant, next page, T-tiger, next page, S-soap, last page, Y-yellow gel). All pages have different fun squishy stuff in them.

**Wallpaper/Fabric Sample Books**

Wallpaper/Fabric Sample books are made from old sample books by gluing...
objects, pictures, and text on each page. These books are heavy enough to remain stable for ease in page turning and hold up to much moisture and rough usage. The colors and textures are interesting to many children.

References/Resources


The National Braille Press has created a national children’s Braille literacy program to encourage families with blind children to read print/Braille books together.

The ReadBooks! Program is giving away bags containing:

- An age-appropriate print/Braille book (birth–7 years) in English or Spanish
- A Braille primer for sighted parents
- A colorful print/Braille place mat
- Print/Braille bookmarks
- A guide for parents on why and how to read books with their young blind child
- A gift coupon redeemable for another print/Braille book or Braille/large print playing cards
- And print/Braille magnetic letters

To request your bag and learn more about the importance of emergent literacy in early childhood for children with vision impairments, visit their website:

http://www.nbp.org/ic/nbp/readbooks/index.html

Want to know even more about the lifelong importance of the emergent literacy stage in the development of children who are deaf-blind? Refer to the following article available from DB-LINK of the National Consortium on Deaf-Blindness to answer these questions:

- What is the importance of literacy for one who is deaf-blind?
- What exactly IS literacy?
- What are the social functions of reading and writing?
- What are the conditions necessary for the development of literacy?
- How can I have a meaningful conversation with my child during literacy experiences?
- Where can I find more literacy materials?
- Information on emergent literacy in young children who are deaf-blind such as definitions, considerations, advantages, disadvantages and further resources to help promote it

This article is available in Spanish, too!

http://www.dblink.org/lib/literacy.htm
Conductive hearing loss, the most common hearing loss in children, occurs when there is a problem with the outer or middle ear and sound is not transmitted to the inner ear (Tran, 2004).

Conductive hearing loss can be caused by a number of variables:
- A buildup of ear wax
- A foreign body in the ear canal
- Tumors of the middle ear
- Prolonged exposure to certain drugs
- Fluid in middle ear due to a cold or allergies
- Typanosclerosis, superior canal dehiscence external (when the roof of the superior semicircular canal is missing),
- Outer or middle ear infections (otitis externa or media)
- Trauma to the ossicular chain such as temporal bone fracture
- Otosclerosis (a disease of the middle ear that occurs when the bones grow together into a mass and are unable to transmit sound easily)
- Erosion of the ossicular chain (cholesteatoma)
- Perforation, or tear, of the tympanic membrane (i.e., eardrum)
- Congenital anatomic anomaly (Tran, 2004)

Twenty-five percent of congenital middle ear anomalies and congenital conductive hearing loss occur in conjunction with inherited syndromes, such as Treacher Collins, Klippel-Feil include Crouzon syndrome, Apert syndrome, CHARGE association, and Goldenhar syndrome (Tran, 2004).

Most conductive hearing loss can be remedied by medical treatment (e.g., antibiotics, removal of blockage), through surgery, or by a hearing aid. Treatment for conductive hearing loss may include antibiotics, ear drops, and draining or flushing the ear. Conductive hearing loss is often temporary (e.g., ear wax, fluid in middle ear). However, it is important to seek medical attention or professional attention before there is permanent damage or whenever a conductive hearing loss is suspected. Never attempt to remove a foreign object from your (or your child’s) ear and do not use cotton tipped swabs to clean the ear of dust, dirt and wax. To avoid accidental damage never attempt to remove a foreign object from your (or your child’s ear) and do not insert cotton tipped swabs into your ear canal.

Sensorineural hearing loss occurs when there is damage to the inner ear, which contains the cochlea, or the auditory nerve (American Speech-Language-Hearing Association (ASHA), 1997-2007).

Sensorineural hearing loss can be caused by many variables:
- Prenatal infections
- Birth injury
- Genetic syndromes
- Drugs that are toxic to the auditory system
- Noise exposure
- Viruses
- Head trauma
- Aging
- Infections (e.g., mumps, meningitis)
- Tumors

This type of hearing loss is permanent, making early identification and management in children vital (Strasnick, 2007). Early detection is important because if congenital (onset prior to birth) or acquired sensorineural hearing loss goes undetected while a child is pre-lingual, a deficiency in language development may arise (Strasnick).

You and your doctor (or your child’s doctor) may decide that a hearing aid or cochlear implant may be the best option as they can help individuals with sensorineural hearing loss perceive softer sound intensities than they originally would be able to hear without the aid (ASHA, 1997-2007). This can be beneficial as sensorineural hearing loss not only involves a reduction in sound level and ability to hear faint sounds, like conductive hearing loss, it can affect speech understanding or the individual’s ability to hear clearly (ASHA).

Can an individual have both conductive and sensorineural hearing losses? Yes

When a child experiences both conductive and sensorineural hearing loss, the loss is referred to as a mixed hearing loss (ASHA).

References

Page turners and page fluffers are both simple adaptations that make it easier for an individual to turn pages. This tip sheet focuses on page turners. (An earlier Tips for Home and School sheet focused on page fluffers. You can access that tip sheet on the project website http://www.unr.edu/educ/ndsip/tipsheets/pagefluffers.pdf)

While page fluffers are placed between pages to create a space for easier page turning, page turners are attached to the page and extend out beyond the page. The individual then turns the page using this extension. The page turners are placed on the pages of the book in a staggered sequence from top to bottom or bottom to top. For example, you might place a binder clip as a page turner at the top of the page. The next clip might be placed slightly below the first clip; the next clip slightly below the second clip and so forth until you have placed a page turner on each page.

A wide variety of items can be attached either permanently or temporarily and used as page turners:

- Popsicle or craft sticks that are cut to a 2-3 inch length
- Binder clips of various sizes
- Small chip clips
- Small magnetic clips for holding papers on a refrigerator
- Large paper clips
- Index tabs
- Pony tail loops
- Rubber bands
- Loose leaf paper rings
- Clothespins
- Small Post-it® notes
- Felt or thin craft foam cut into strips

Because some of the items that can be used as page turners might be heavier than others (e.g., large binder clips), they might be more appropriate for durable books such as board books used with young children. Other materials such as the index tabs may not work very well with board books, but are great for any type of paper book. Other materials (e.g., pony tail loops) can be used with any book.

Page turners can be attached temporarily or permanently. Items such as binder clips, chip clips, magnetic refrigerator clips, and clothespins can be added and then removed easily from any book. Such easily removable page turners are great to use with library books where you do not want to permanently attach a page turner. Other page turners (e.g., large paper clips) might be hot glued to a page and thus become permanent. In other instances you might add Velcro to a page and then the opposite Velcro to the page turner (e.g., Popsicle or craft sticks, pony tail loops). The Velcro allows you to attach the page turner, but to remove it if it is no longer needed. Once the page turner is removed, the Velcro remaining on the page then acts as a page fluffer. You can also make Popsicle/craft sticks into temporary page turners by hot gluing a large paper clip to the back of the stick. You then use the paper clip to slide the page turner onto the page.

Can You Buy Page Turners?

This kit from Augmentative Resources comes with 10 clear vinyl triangle pockets lined with magnets to slide onto the corner of each page (intended for paper books, not board books). You touch the end of the magnetic rod to black area on the magnetic page corners to turn pages.

The Sammons Preston company (www.Sammonspreston.com) also has page turners available for purchase. The turner to the left in the bottom photo has a long, curved bar tipped with a rubber end that is used to turn pages. The page turner in the top photo has a tacky pad that the reader presses against the page to be turned. The extension on the end helps the page to be turned and keeps the page from flipping back as the user lifts the tacky pad from the page.
Main Conference will be held May 1-3
Preconferences will be held April 29-30 regarding Managing Challenging Behaviors and Pediatric Feeding Problems.

Why attend?
- Discover strategies to improve your practice
- Share problems and solutions with others
- Enhance professional growth and survival skills
- Network at a national conference designed just for you

For more information visit:
http://www.contemporaryforums.com

Nevada Annual Early Childhood Conference
April 10th-12th, 2008
South Point Hotel, Casino and Spa
Las Vegas, Nevada

For more Information
http://www.nevaeyc.org/conferences.asp

2008 Nevada Department of Education Mega Conference: Realizing Student Success
April 25-27, 2008
South Lake Tahoe, NV
Join us as we celebrate Nevada's successes and highlight strategies and programs that have been proven to effect change for learners and educators alike.

For further details and to register, visit:
http://www.doe.nv.gov/schoolimprovement.mega.html

I enjoy your newsletter, and I know someone who would benefit from receiving future issues. I have entered the address below.

I've moved! Please send future issues of your newsletter to my new address below.

Please select one:  ☐ Electronic Version   ☐ Standard (paper) Version

Name: ___________________________ E-mail: ___________________________

Address: __________________________________________________________

City: ____________________________ State: ______ Zip: ____________

Return to: Katina Raptis• Department of Educational Specialties / MS 299
University of Nevada, Reno • Reno, NV 89557 • FAX 775-784-4384
### What Combination of Vision and Hearing Impairments (and other disabilities) Might Be Present for a Child Identified as “Deafblind”?  
*(To be identified as deafblind, a child must have BOTH documented hearing and vision losses as specified below)*

<table>
<thead>
<tr>
<th>Documented Hearing Loss</th>
<th>Documented Vision Loss</th>
<th>Other Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documented hearing and vision loss as specified in the columns below <strong>can combine in any way</strong>. If the child is identified as having any of the below for hearing and any of the below for vision, then that child is eligible as “deafblind.”</td>
<td></td>
<td>Can the student have other disabilities in addition to the sensory impairments and still be identified as deafblind? <strong>YES</strong></td>
</tr>
<tr>
<td>Mild (26-40 dB loss)</td>
<td>Low Vision (Visual acuity of 20/70 to 20/200&gt;)</td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td>Moderate (41-55 dB loss)</td>
<td>Legally Blind (Visual acuity of 20/200 or less or field restriction of 20 degrees)</td>
<td></td>
</tr>
<tr>
<td>Moderately Severe (56-70 dB loss)</td>
<td>Light Perception Only</td>
<td></td>
</tr>
<tr>
<td>Severe (71-90 dB loss)</td>
<td>Totally Blind</td>
<td></td>
</tr>
<tr>
<td>Profound (91+ dB loss)</td>
<td>Diagnosed Progressive Loss</td>
<td></td>
</tr>
<tr>
<td>Diagnosed Progressive Loss</td>
<td>Documented Functional Vision Loss</td>
<td></td>
</tr>
<tr>
<td>Documented Functional Hearing Loss</td>
<td>Cortical Visual Impairment</td>
<td></td>
</tr>
<tr>
<td>Auditory Neuropathy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A functional assessment is defined as a non-clinical assessment carried out by a trained professional (vision or hearing as appropriate) using commonly accepted tools, checklists, and measures.

Possible other disabilities:
- Health Impairments
- Cognitive Impairments
- Physical / Orthopedic Impairments
- Speech, Communication, and/or Language Impairment
- Other disabilities (such as autism, learning disabilities)