



# Assistive Technology

September 20-26, 2020

Celebrate with us!



North Dakota School for the Deaf Parent-Infant Program and School Age Outreach Department  
Nicole, Denise, Carol, Linda, Ashley and Lana

**Deaf Awareness Week** is a national **week** of **celebrating deafness**.

It is observed annually throughout the last full **week** of September.

The **week** focuses on promoting the positive aspects of **deafness**, encouraging social inclusion, and raising **awareness** of the organizations that support those who are **deaf**.

## SOME of the Services that we provide:

### Parent-Infant Program (0-5 yrs.)

- Family Support and Education Centered
- Language and Auditory Fun
- Assistance in developing Individualized Family Service Plan
- Information on education and communication choices

### School Age Outreach (3-21 yrs.)

- Assessments
- Sign Language
- Developmental
- Transition
- Youth activities
- Consultations
- ❖ In-Services
- ❖ Observations
- ❖ IEP and/or 504 Planning
- ❖ Classroom strategies, modifications, accommodations



**Any questions or concerns on children with hearing loss, contact your regional outreach office.**

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# Around the house

**ALERTING DEVICES:** Having a hearing loss can mean missing important sounds around the house. Alerting devices make these important sounds accessible by converting them to signals that use visual cues (flashing light), tactile cues (vibration) or increase the sound's volume.

## BABY ALERT MONITORS



## FIRE ALARM SYSTEMS



## TELEPHONE ALERTING SYSTEM



## ALARM CLOCKS



## PAGER SYSTEMS



Adapted from  
Connevans Limited  
"Deaf Equipment  
Explained"

## DOOR BELLS



## WEATHER ALERT



*The range of Alerting Devices that are available for individuals with hearing loss is sure to assist every individual's needs.*

## How do they....

- ❖ Know when the phone is ringing?
- ❖ Wake up to an alarm clock?
- ❖ Hear someone at the door?
- ❖ Hear fire alarms/smoke detectors?
- ❖ Hear a baby crying?



People with hearing loss may only need to amplify the alerting sound to hear it. Others may need the alarm sounds to be visual or feel it. They do this by connecting their phones, alarm clocks, doorbell, fire alarms/smoke detectors and baby monitors to something that lights up, “texts,” or vibrates.

### LOUDER

Some assistive alerting devices have adjustable volume up to 113 dB and tone control which allows a person to adjust the frequency of the alarm to a frequency that is easier to hear for the person with a hearing loss.



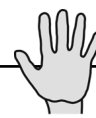
### VISUAL

Some assistive devices alert a person with a hearing loss by making it visual, either with a flashing light or “text.”



### TACTILE

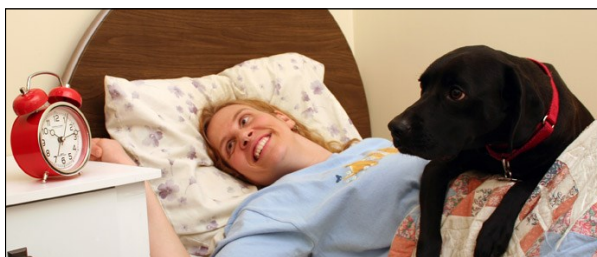
Some assistive devices use vibration to alert a person with a hearing loss. This may be to a “shaker” that is placed under a bed or cushion. It could vibrate a pager, cell phone or smart watch.



## Service Dogs

There are special dogs that are custom-trained to assist people who are deaf or hard of hearing. They physically alert their human to common sounds such as a smoke alarm, doorbell, alarm clock, telephone ring or child's cry.

A “Hearing Dog” nudges or paws its human alerting them to a sound and then leads them to its source.

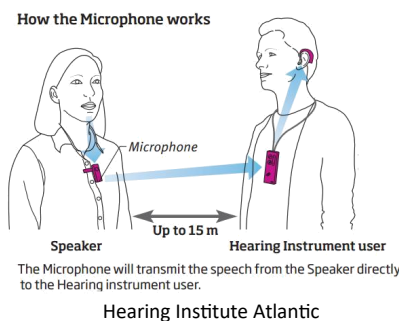


Can Do Canines

## Listening Systems

Sometimes in noisy situations, hearing devices such as hearing aids, cochlear implants or bone anchored hearing aids are not enough to hear. A speaker may be asked to wear a special microphone that sends the sound directly to a person's hearing device. This is called a personal FM system. The sound may go to a

room speaker system which amplifies the sound so everyone can hear it. This is called a sound field system. Some rooms have special auditory induction loops. It allows a



person with a T-coil setting on their hearing device to have direct access to the sound system. Typically these are found in auditorium settings.

# Assistive Technology create access for Deaf and Hard of Hearing individuals

It is sometimes easy to forget that people who are deaf or hard of hearing did not have access to the telephone network until the Teletypewriter (TTY) was developed in the 1960s. A TTY is a special device that lets people who are deaf, hard of hearing, or non-verbal use the telephone to communicate, by typing messages back and forth to one another instead of talking and listening. A nationwide relay service for TTYs began in the 1990s. The phone had been around since the late 1800s.



Typing on a TTY

In 2002, videophone services were developed for the Deaf population. Videophone booths were distributed in 2004. Video relay service centers opened up across the U.S. in 2005.

Many signing Deaf individuals have embraced the videophone. This allowed them to call their friends and family members and use sign language for communication. It can be face-to-face or through a relay operator who is skilled in sign language. Whether talking to an acquaintance, calling for information or ordering a pizza, communication to deaf individuals is done with sign language.



Using a Video Phone Relay Operator to call a non-signer.

Closed captions for television was developed in the 1970s. Closed captioning and subtitling are both processes of displaying text on a television, video screen, or other visual displays to provide additional or interpretive information. It became available on a limited, voluntary basis in the 1980s with the use of closed caption decoder equipment. It was finally required and made available through built-in television caption decoder systems in the 1990s.



On top, is a caption box that was needed to see captioned TV programs. A sample of captioning on TV is shown.



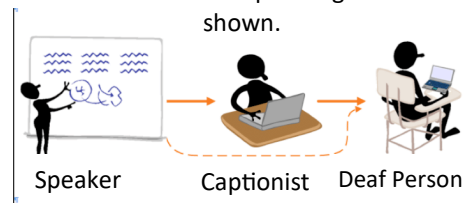
With CaptiView, the device is secured in a cup holder. A flexible arm is adjusted to the right angle. Once the movie begins, the device will present all the dialogue in text on the screen.

Going to the movies was not possible until the development of captioned film prints in the 1980s and caption display systems in the late 1990s. There are a variety of devices offered by theaters to provide captioning for individual Deaf movie-goers. Additionally, some films are open-captioned (similar to subtitles) so everyone in the theater can see them.

Captioning at events including the school classroom is also now available. There are many speech-to-text programs with the better programs being about 80% accurate. This continues to improve, however, having a live or remote captionist is most reliable.

A captionist is someone who listens and types what s/he hears. It can be on-site or they can listen from a different location, including another state.

It has been fairly recent that individuals with hearing loss have been able to have access to the telephone network, television program, movie theaters and community events. These services have to be asked for and should be provided with no extra charge to the individuals.



A captionist is a skilled person who can type what is being heard on a specialized program.

# Assistive Technology for the Deaf Word Search

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

Find the following assistive technology for the Deaf words in the puzzle above. It may be up and down, horizontal or diagonal.  
Two words appear as one in the puzzle.

AMPLIFY	BABY ALERT	CAPTIONING	FIRE ALARM
FLASHING LAMP	PAGER	SHAKE AWAKE	SERVICE DOG
STROBE	TEXTING	VIDEO PHONE	WEATHER ALERT



This drawing was made by our Parent-Infant Program and School Age Outreach Specialist, Lana Zimbelman. Find the ten items listed on the next page.

Compliments of North Dakota School for the Deaf/Resource Center for the Deaf and Hard of Hearing School Age Outreach Dept.

# HIDDEN OBJECTS:

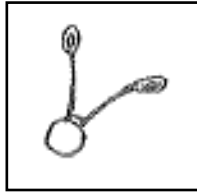
Find the following objects shown in the square in the picture.

## Hearing Aid clips



HearingSol

A lanyard that attaches to hearing device in case it falls out of the ear. It stays attached to the clothing.

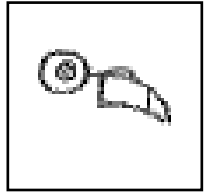


## Cochlear Implant



John Hopkins Medicine

It is a small electronic hearing device that may be an option when hearing aids do not provide the clarity of sound.

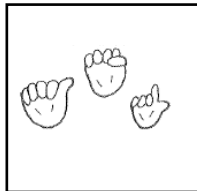


## ASL hands



New Skills Academy

Some Deaf people utilize a visual language called American Sign Language. They use their hands to communicate.

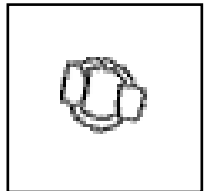


## Huggie Aid



Warner Tech Care Products

An attachment to prevent hearing aids from falling off during exercise or daily use.



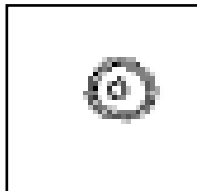
## Battery



675 13 312 10

Hill Hear Better

Hearing devices are electronic so need power. There are a variety of battery sizes to match each device.

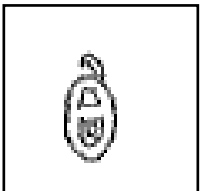


## Battery Tester



HAB Hearing

It is used to test if a hearing aid battery has any life left.



## Behind the Ear Hearing Aid



Pinterest

It is a hearing aid that hooks over the top of your ear and rests behind the ear. A tube connects the hearing aid to a custom earpiece called an earmold that fits in your ear canal.

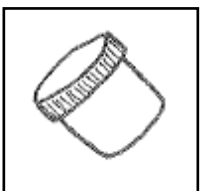


## Dry Jar



Hocks Hearing Healthcare Products

It has drying capsules in a small compartment inside a small pot, which is where you place the hearing aids. It keeps the moisture out of the electronics.



## Softband Bone Anchored Hearing Aid



Cochlear Hear and Now

It is the non-surgical treatment of hearing loss through sound vibrations to the inner ear. This is in contrast to regular hearing aids, which amplify acoustic sounds that enter the ear canal.

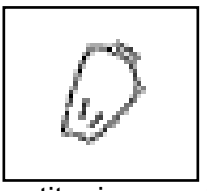


## Bone Anchored Hearing Aid



ENT Today

A surgical treatment of specific hearing loss. The sound processor snaps on a titanium post and converts sounds into vibrations, which are then sent through the skull bone and directly on to the inner ear.



# Meeting a Deaf person with an interpreter

An interpreter is not technically an assistive technology. They are, however, very important if a deaf individual communicates with sign language. Imagine being in a place where no one knew your language. How would you talk to someone? A sign language interpreter helps with communication. They sign what is being heard and voices what a Deaf person signs.

Having a sign language interpreter at the same place with the deaf individual is ideal. Sign Language Interpreters are not always available so the next best thing is to call a remote sign language interpreter who can listen and sign what is being said and voice what the deaf individual is signing. There would need to be an internet system and some kind of video screen to see the sign language interpreter.

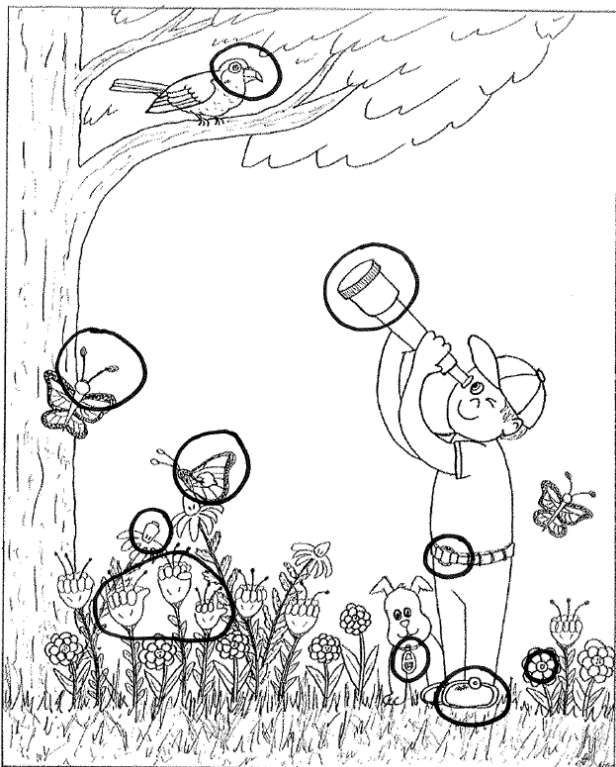


Hawaii COVID-19

**If you meet a person who uses a sign language interpreter, here are a few tips:**

1. Avoid directing questions to the interpreter while the interpreter is working.
2. Respect an interpreter's break time. Interpreting is physically and mentally taxing and they need some quiet time.
3. Address the Deaf person directly. Avoid using "tell him, ask her" phrases.
4. Try communicating directly with the deaf individual yourself. Write notes, act out what you are trying to say, or learn a few signs yourself.

## ANSWER KEY:



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

# How to access services from North Dakota School for the Deaf/ Resource Center on Deaf and Hard of Hearing

Families, school districts, area education agencies, other interested individuals and North Dakota School for the Deaf/Resource Center on Deaf and Hard of Hearing (NDSD/RCDHH) work together to provide appropriate services...

## For on-site school-age programs:

- 1** Contact your local school district
- 2** Contact North Dakota School for the Deaf.  
Superintendent: 701-665-4400  
Toll Free: 1-800-887-2980
- 3** Tour North Dakota School for the Deaf's campus with your area education agency and local school district staff
- 4** Work with your school district to schedule an IEP meeting to determine placement that includes a NDSD/RCDHH representative.



A Division of the  
ND Department of Public Instruction,  
Kirsten Baesler, Superintendent

## Parent-Infant Programs & School Age Outreach Regional Offices

**Program Coordinator**  
1401 College Drive North  
Devils Lake, ND 58103  
(701) 665-4400  
Toll Free: 1-800-887-2980

**Northwest**  
Memorial Hall  
500 University Avenue West  
Minot, ND 58701  
(701) 858-3357

**Southwest**  
418 East Broadway, Suite 228  
Bismarck, ND 58501  
(701) 328-3987 or  
123 Summit Street  
Underwood, ND 58576  
(701) 215-1718

**Northeast**  
1401 College Drive North  
Devils Lake, ND 58301  
(701) 665-4420

**Southeast**  
1321 23rd Street South,  
Suite A  
Fargo, ND 58103  
(701) 239-7373  
(701) 239-7375



## To access Outreach Services:

- 1** Contact the designated person listed below for each service area:

**Parent-Infant Program:**  
(For birth to age five)  
Carol Lybeck.....701-665-4400  
[Carol.Lybeck@k12.nd.us](mailto:Carol.Lybeck@k12.nd.us)

**School Age Services:**  
(Assessments & Consultations)  
Carol Lybeck...701-665-4400  
[Carol.Lybeck@k12.nd.us](mailto:Carol.Lybeck@k12.nd.us)

**Adult Services:**  
Pam Smith.....701-665-4401  
[Pam.Smith@k12.nd.us](mailto:Pam.Smith@k12.nd.us)

**Interpreting/Communication**  
Lilia Bakken.....701-665-4423  
[Lilia.Bakken@k12.nd.us](mailto:Lilia.Bakken@k12.nd.us)

**Summer Camps**  
Linda Ehlers.....701-237-7374  
[Linda.A.Ehlers@k12.nd.us](mailto:Linda.A.Ehlers@k12.nd.us)

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