

# Standards for Special Education

< Amended June 2004 >



# Essential Components

OF EDUCATIONAL PROGRAMMING

for

Students  
who are  
Deaf or  
Hard of  
Hearing

ACCESS

APPROPRIATENESS

ACCOUNTABILITY

APPEALS

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[www.education.gov.ab.ca/k\\_12/specialneeds](http://www.education.gov.ab.ca/k_12/specialneeds)

This document applies to grades 1–12 special education in public and separate school boards, including Francophone education regional authorities, but excluding charter schools, and is intended for:

<i>Teachers</i>	✓
<i>Administrators</i>	✓
<i>Parents</i>	✓
<i>General Public</i>	✓
<i>Other</i>	✓

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# Table of Contents

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## **Introduction**

Foreword .....	1
Purpose.....	1
Links to <i>Standards for Special Education, Amended June 2004</i> .....	1
Guiding Principles .....	2
The Students and Their Unique Educational Abilities and Needs .....	2

## **Essential Components**

1. Meaningful Parent and Family Involvement .....	3
2. Learning Team.....	3
3. Knowledgeable Staff.....	4
4. Individualized Program Plan .....	4
5. Educational Programming and Services .....	5
a) Language and Communication.....	5
b) English- or French-Language Instruction.....	6
c) Assistive Technology.....	6
d) Classroom Environment .....	7
e) Social Emotional Development.....	7
6. Planning for Transition .....	8

## **Appendix A**

Communication .....	9
---------------------	---

<b>Additional Resources</b> .....	10
-----------------------------------	----

<b>Glossary of Key Terms</b> .....	11
------------------------------------	----

<b>References</b> .....	15
-------------------------	----



# Introduction

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## Foreword

*Essential Components of Educational Programming for Students Who Are Deaf or Hard of Hearing* is intended for classroom teachers, resource personnel, administrators and parents. It is one of a series of documents developed to facilitate programming for students in grades 1 to 12 who have special education needs. Other topics in the series include programming for students with behaviour disabilities, programming for students who are blind or visually impaired, and programming for students with autism spectrum disorders.

## Essential Components

The six essential components listed in this document are contained in *Standards for Special Education, Amended June 2004* and are therefore mandated by Alberta Education. Each component is considered essential to the provision of a comprehensive program. However, the manner in which the components are implemented may be affected by such practical considerations as availability of resources and needs of the particular student.

## Sample Indicators of Effective Programming

The sample indicators are examples of effective practices that illustrate the implementation of the essential component. The indicators will vary because of the unique abilities and needs of individual students. It is not the intent to list all possible indicators or to require all listed indicators be implemented for every student.

## Purpose

The purpose of this document is to:

- identify the essential components of appropriate programming that are mandated by Alberta Education for students with special education needs
- provide examples of effective practices
- establish a common understanding of specialized terminology
- clarify the meaning of appropriateness, taking into account what is reasonable for educational programming for students who are deaf or hard of hearing.

## Links to *Standards for Special Education, Amended June 2004*

*Standards for Special Education, Amended June 2004* requires school boards, francophone regional authorities and designated special education private schools to identify students with special education needs in grades 1 to 12 and deliver effective programming for them. These standards promote consistent, high quality educational practices within Alberta.

The *Essential Components* series is directly linked to the appropriateness section of *Standards for Special Education, Amended June 2004* in order to ensure appropriate programming related to professional standards, individualized program planning, implementation, evaluation, and parent involvement in decision making. Appropriateness means that “educational programming and services are designed around the assessed needs of the student and are provided by qualified staff who are knowledgeable and skilled” (*Standards for Special Education, Amended June 2004*, page 2).

## Guiding Principles

The essential components of programming for students who are deaf or hard of hearing are guided by the following principles.

- Programming is an active process that is based on the student's assessed abilities and needs and is continuously monitored and adjusted.
- Students who are deaf or hard of hearing participate in Alberta Education's programs of study to the fullest extent possible.
- The essential components of educational programming overlap; they are processes that work together.
- Meaningful parent and family involvement is intrinsic to all of the essential components.
- Staff and students should have access to specialists and resources that support the educational program.

## The Students and Their Unique Educational Abilities and Needs

Students who are deaf (D) or hard of hearing (HH) have a diagnosis from an audiologist which identifies the presence and degree of hearing loss. The Canadian Academy of Audiology defines hearing loss as mild (26–40 decibels), moderate (41–55 decibels), moderate to severe (56–70 decibels), severe (71–90 decibels), or profound (90+ decibels), or a combination of these levels. Although medical terminology refers to people with mild and moderate hearing loss as hard of hearing and those with severe and profound hearing loss as deaf, the degree of hearing loss does not predetermine how students function in auditory, educational and social situations. Students who have a moderate hearing loss may function as deaf, and, with current technologies, students with severe to profound hearing loss may function as hard of hearing. Students who are D or HH, including those who have additional disabilities (e.g., deaf-blind), encompass a vast array of abilities and needs and therefore the specialized supports that are required also vary dramatically.

Students who are D or HH follow Alberta Education's programs of study at a rate in line with their abilities and needs. To fully benefit from their educational program, students need support from rehabilitation, health and/or education professionals with specific training, knowledge and skills for D or HH in some or all of the following areas, listed in alphabetical order:

- assistive technologies
- classroom environment
- communication methods
- English- or French-language instruction
- language development.

Students who use an oral/aural approach, using speech and residual hearing with assistive technologies, may receive their program in an inclusive classroom, a specialized program for oral students with hearing loss where available, or a combination of programs.

Students who use sign language as their primary mode of communication may choose, where available, a specialized program that uses American Sign Language (ASL) and/or Manually Coded English (including an oral/aural component) as the language of instruction. (For more information see Language and Communication, page 5). Students may attend an inclusive classroom in their community school. Staff need to understand which language and communication method(s) the student is using and build corresponding supports.

# Essential Components

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## 1. Meaningful Parent and Family Involvement

*(Standards for Special Education, Amended June 2004, pages 3, 5, 6–10, 12, 14)*

Students develop positive results in their communication skills, language development, academic achievement and attitudes when parents are involved. Parents are valued and contributing members of the learning team and their input and influence permeate all aspects of their child's education. Parents have access to information regarding all educational programming and communication options as well as all educational and health services available to their child.

### Sample Indicators of Effective Programming

- Learning team members engage in ongoing, frequent communication with parents and use a variety of communication methods depending on the strengths and needs of a particular family.
- Parents participate in the individualized program plan (IPP) development and review process. In addition to academic and social goals, unique cultural needs are considered in the IPP and day-to-day programming.
- The family receives information about learning opportunities regarding hearing loss and specific skills (see Language and Communication, page 5) they may use in the home and community.
- Parents provide information to the school about previous and existing support services provided to the student outside the school setting.

## 2. Learning Team

*(Standards for Special Education, Amended June 2004, pages 4, 8, 10)*

All students who are deaf or hard of hearing have learning teams who work together to plan, implement, monitor and evaluate programming and services. A certificated teacher directs and leads the learning team in developing goals and objectives that are educationally relevant.

### Sample Indicators of Effective Programming

- A core collaborative learning team is established consisting of the classroom teacher, parents, student, a trained teacher of the D and HH and/or other specialists with expertise in the field of D and HH (see Glossary of Key Terms).
- Depending on the needs of the student, an expanded learning team may include, but is not limited to, additional teachers, educational assistants and specialists, including speech–language pathologist, communication support personnel (e.g., educational interpreter, cued speech transliterator), educational audiologist, school administrator, school jurisdiction staff and deaf or hard-of-hearing adult who serves as a role model.
- Where students have an additional disability (e.g., deaf–blind), specialists knowledgeable in the field of the additional disability become members of the learning team and work in concert with parents and other team members to develop programs that meet student needs in a coordinated manner.

- The core learning team has regular meetings with frequent and meaningful communication among parents, school staff, school jurisdiction, provincially based and community-based supports.
- Members of the learning team share information and resources with team members and appropriate staff to address each student's unique learning and communication needs in the classroom and school community.
- Verbal or written input provided by learning team members is respected and considered in the development of the student's IPP goals, objectives and strategies.

### **3. Knowledgeable Staff**

*(Standards for Special Education, Amended June 2004, pages 9, 10)*

Educational programming and services are designed around the assessed abilities and needs of the student. Staff become knowledgeable by accessing professional development opportunities and working collaboratively with specialists.

#### **Sample Indicators of Effective Programming**

- Staff have access to specialists in the field of hearing loss to provide information and support for student programming.
- Members of the student's learning team include in their professional development plans the acquisition of knowledge, skills and attitudes appropriate for developing best practices for students who are D or HH.
- Information is shared regarding opportunities to promote knowledge and skills in language development and communication methods through the learning team.

### **4. Individualized Program Plan**

*(Standards for Special Education, Amended June 2004, pages 4, 7, 10–11)*

An individualized program plan (IPP) is required for each student with a special education code. The IPP includes essential information for planning, implementing, monitoring and evaluating the student's educational program. IPPs are working documents for learning teams to use throughout the year. All elements of the IPP, as identified in *Standards for Special Education, Amended 2004*, are addressed.

#### **Sample Indicators of Effective Programming**

- The learning team gathers information from a variety of sources, including current assessments, to develop a program that addresses a student's individualized learning needs.
- The IPP is a clear, concise working document which is developed, implemented, monitored and evaluated to support the student's learning.
- IPPs are the result of a collaborative process involving all members of the core learning team and as many members of the expanded team as possible.
- The IPP reflects environmental and instructional adaptations and assessment accommodations as required to access the learner outcomes of the Alberta programs of study.
- The IPP identifies all supports required to address the student's needs (e.g., method(s) of communication, assistive technology).
- The IPP is reviewed and updated by the learning team throughout the year to ensure appropriate programming and continued knowledge and support.

## 5. Educational Programming and Services

(Standards for Special Education, Amended June 2004, pages 3, 4, 9–11)

Students who are D or HH have a range of abilities and needs that may require a variety of services and supports to meet their educational goals. The services and supports identified under the umbrella of this essential component should be considered for each student, but not all are appropriate for every student. The learning team reviews and defines the supports and services appropriate for the student. Students may benefit from school-based, provincially based and/or community-based supports, such as trained teachers of D and HH, educational audiologists, sign language interpreters, speech–language pathologists, adult role models who are D or HH, and others who can provide expertise in the areas identified.

### a) Language and Communication

Parents and children typically establish whether ASL or English is the primary language used in the home before the child enters Grade 1. The decision may be determined in part by the child's degree of hearing loss, age of onset, age of diagnosis and amplification, and philosophy of the parents. Consistent, planned and structured teaching of the chosen language promotes the student's ability to understand and use language.

Monolingual programs use methods and teaching strategies that emphasize access and exposure to English as a spoken language. Various communication methods may be used to maximize and promote linguistic opportunities in English.

Dual language programs use a bilingual framework to develop competencies in language and literacy through access and exposure to both American Sign Language (ASL) and English. Children in a dual language program develop a visual language, ASL, as their first language. A strong foundation in ASL serves as the basis for the development of English as a second language, specifically reading and written language skills.

American Sign Language	English
Bilingual/bicultural approach using ASL and English	Auditory–oral approach Auditory–verbal approach Cued Speech Manually Coded English System

It is beneficial to review the student's language and communication needs periodically, as they may change in different settings and/or as the student grows older. (For more information, see Appendix A, Communication.)

#### Sample Indicators of Effective Programming

- The same communication method is used at home and school unless otherwise decided by the parents in conjunction with the learning team.
- Staff who are responsible for supporting the student's communication have sufficient training in the chosen method(s) to provide accurate and meaningful access to the language of instruction, auditory and/or visual information, and communication in the school environment.

- Staff who work with the student are knowledgeable and use strategies that enhance communication (e.g., the speaker establishes eye contact with the student prior to speaking/signing, provides class notes to allow ongoing visual access to the speaker's verbal and/or signed communication).
- Communication support is provided during situations such as extra curricular activities, field trips and assemblies.
- Students are taught to recognize when communication breakdowns occur and implement strategies to repair communication.
- Flexible scheduling allows time to support student needs specific to their hearing loss (e.g., periodic rest breaks after long periods of speech reading or reading sign language, sign language instruction, auditory training, amplification checks).

## **b) English- or French-Language Instruction**

Whether the student communicates in English, ASL, French, Langue des signes québécoise or a combination, competency in reading and writing English or French is required to complete Alberta Education's requirements for an Alberta High School Diploma or a Certificate of High School Achievement. Consistent, targeted English- or French-language instruction is central to developing knowledge and skills to meet these requirements for all students, including those who are D or HH.

English- or French-language instruction is based on the assessed level of the student. Assessments may vary for students who use English, ASL, or a combination of the two languages.

### **Sample Indicators of Effective Programming**

- Targeted English- or French-language goals and objectives are evident in the student's daily activities and curriculum-based instruction.
- Assessment to determine if there are delays or gaps in the D or HH student's English- or French-language development includes the following areas:
  - *Semantics*: how words create meaning in various combinations and contexts
  - *Syntax*: how words are combined to create meaning
  - *Pragmatics*: how language is used in social interactions
  - *Literacy*: reading and writing.

## **c) Assistive Technology**

Students have access to assistive technology (AT) that supports learning. Specialists in the field of hearing loss can identify where AT can support the student's learning.

### **Sample Indicators of Effective Programming**

- Appropriate amplification is identified by an audiologist and used by the student. Amplification may include hearing aids, cochlear implant, and when a personal FM system is not feasible, a sound field system.
- Appropriate equipment and strategies are used to ensure the student's amplification maximizes access to sound output from the computer, DVD, video-based digitalized technology and recording devices.
- Wearing and monitoring amplification equipment occurs daily and troubleshooting occurs when necessary.

- Closed captioning is available to students when information is presented through a television. (For more information, see Glossary of Key Terms.)
- Antistatic equipment is used to minimize risk of damage to the student's cochlear implant when warranted. This may include a grounded wrist strap, desk mat, floor mat, grounded monitor screen and connecting ground cords.
- Video conferencing is used to facilitate face-to-face discussion between two individuals who communicate through visual means (e.g., sign language, cued speech).

#### **d) Classroom Environment**

Students require a learning environment that promotes communication and access to information. An environment that is conducive to learning takes into account the acoustics, light source, room configuration and student placement.

##### **Sample Indicators of Effective Programming**

- Soft, dense, acoustically friendly materials such as curtains, carpeting, baffles and soft-sided dividers that absorb background noise are evident.
- The teacher, chalk/whiteboard and computer are free from glare and clearly seen by the student.
- Ambient noise, such as fans, fluorescent lighting, shuffling paper or hallway noise, is identified and reduced or eliminated.
- The student is seated according to the recommendations of the educational audiologist or teacher of the D and HH.

#### **e) Social Emotional Development**

Students who are D or HH may be unaware of or misunderstand some social norms and conduct. Their limited hearing can affect their ability to access incidental information and recognize social nuances. Fostering socialization skills is important to promote healthy adult and peer relationships and contribute to a strong self concept. Students who develop a strong self concept are more likely to advocate for themselves, a skill that is vital in their education and in the adult world.

##### **Sample Indicators of Effective Programming**

- Staff is aware of the students' peer relationships and provides support and guidance when necessary.
- Students whose primary communication mode is sign language have opportunities to interact with other signing students.
- Sign language instruction/clubs for hearing peers are provided to reduce isolation of the D or HH student and promote student-to-student communication and relationships.
- Students can describe their strengths, areas of need and conditions that support their learning.
- Students take initiative and address concerns when situations arise where self advocacy is required.

## **6. Planning for Transition**

*(Standards for Special Education, Amended June 2004, pages 4, 5)*

Planning is necessary when students transition from one setting to another, be it immediate (day to day, classroom to classroom), intermediate (year to year, grade to grade) or long-term (elementary, junior high/middle school, senior high and into post-secondary education or work).

The learning team plays a vital role in the transition. Staff at the receiving environment benefit from an understanding of the student's strengths and needs so they can prepare to provide support for the incoming student. The receiving environment can be adapted to overcome barriers and implement supports prior to arrival of the student with hearing loss. The student may receive instruction in specific skills to promote a smooth transition to the demands and expectations of the new environment.

### **Sample Indicators of Effective Programming**

- The learning team identifies specific goals necessary for successful transition and entry into the receiving environment.
- Well in advance of the transition, IPPs identify plans specific to each student's needs to support the transition to the new environment.
- Members of the learning team communicate information about the student's programming strengths and needs to the staff in the receiving environment.
- Staff, student and parents are involved, have the same expectations and are prepared when the transition to the new environment occurs.
- The student's transition occurs with some of the core learning team members, who also provide service in the new placement.

# Appendix A: Communication

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**American Sign Language (ASL)** is “a natural language used by members of the North American Deaf community. It is a language that has developed naturally over time among a community of users. ASL exhibits all of the features of any language, in that it is rule-governed, its symbols are organized and used systematically, it is productive, the number of sentences that can be made is infinite, and new messages on any topic can be produced at any time. In ASL, hand shape, movement and other grammatical features combine to form signs and sentences.” (Gallaudet University)

**Auditory–Oral Approach** is based on the principle that many “deaf and hard-of-hearing children can be taught to listen and speak with early intervention and consistent training to develop their hearing potential. The focus of this educational approach is to use the auditory channel (or hearing) to acquire speech and oral language.” (Alexander Graham Bell Association for the Deaf and Hard of Hearing)

**Auditory–Verbal Approach** is “similar to the auditory–oral approach in that there is a strong emphasis on maximizing a child’s residual hearing and his ability to use it.” (Alexander Graham Bell Association for the Deaf and Hard of Hearing) “It focuses on the use of sound (audition) as the primary channel for learning and gaining meaning from the environment. Parents are at the centre of this approach and take a full and active part in every session with the Auditory–Verbal therapist.” (Auditory Verbal UK)

**Cued Speech** is “a visual communication system that uses eight hand shapes in four different placements near the face in combination with the mouth movements of speech to make the sounds of spoken language look different from each other.” (National Cued Speech Association)

**Langue des signes québécoise** is the Quebec sign language used by deaf people in Quebec and other centres in Canada. It is closely related to American Sign Language and French Sign Language.

**Manually Coded English Systems** refer to a number of sign language systems that use grammar and sentence structures of English. The main methods are listed below in alphabetical order.

**Contact Sign (previously called Pidgin Signed English)** is a sign language method that uses a combination of ASL and English signs in English word order (subject, verb, object) as much as possible when constructing sentences. A person can speak while signing.

**Signed English** is a broad term that refers to a visual representation of English using a combination of ASL signs, English signs, finger spelling, and standardized markers to show inflections, plurals and tenses.

**Signing Exact English (SEE)** is a sign language system that represents literal English. The method is based upon the principle of one word=one sign, with additional dedicated signs to represent prefixes and suffixes (e.g., -ment, -ness, -s, pre-). It works toward making “visible everything that is not heard. SEE supplements what a child can get from hearing and speech reading.” (SEE Center for the Advancement of Deaf Children)

**Speech reading** is the ability to gain understanding of speech by watching lips, facial expressions, gestures, contextual cues, body language, as well as lip reading.

# Additional Resources

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For more information and sample strategies, refer to the following Alberta Education resources. Unless otherwise indicated, you may download resources at no cost from [www.education.gov.ab.ca/k\\_12/specialneeds](http://www.education.gov.ab.ca/k_12/specialneeds), or purchase print copies from the Learning Resources Centre at [www.lrc.education.gov.ab.ca](http://www.lrc.education.gov.ab.ca), telephone (780) 427-5775, toll free in Alberta by first dialing 310-0000.

*Individualized Program Planning: ECS to Grade 12* (2006), Book 3 of the *Programming for Students with Special Needs* series

*The Learning Team: A Handbook for Parents of Children with Special Needs* (2003)

*Make School Work for You* (2001)

*Teaching Students who are Deaf or Hard of Hearing* (1995), Book 4 of the *Programming for Students with Special Needs* series

## **Also available from the Learning Resources Centre**

Humphries, Tom et al. *A Basic Course in American Sign Language, Second Edition*. Carrollton, Texas: TJ Publishers, Inc, 1994

## **Resources from other Government of Alberta departments**

Alberta Human Resources and Employment. *Alberta Occupational Profiles, Sign Language Interpreter*, March 2005. Available at: [www.alis.gov.ab.ca/occinfo](http://www.alis.gov.ab.ca/occinfo)

Seniors and Community Development. *Standards for Interpreting in Educational Settings, Early Childhood Services to Grade 12*, 1993. Available at [www.seniors.gov.ab.ca/CSS/premiers\\_council/publications/Standards.asp](http://www.seniors.gov.ab.ca/CSS/premiers_council/publications/Standards.asp)

Student Health Partnerships. Information available at [www.education.gov.ab.ca/shi/](http://www.education.gov.ab.ca/shi/)

## **Regional Educational Consulting Services**

Calgary: Regional Educational Assessment and Consultation Services (R.E.A.C.H.)  
(403) 777-6983

Edmonton: Edmonton Regional Educational Consulting Services (E.R.E.C.S.)  
(780) 472-4455

Francophone: Le Réseau provincial d'adaptation scolaire (Réseau)  
(780) 487-3200

Grande Prairie: Coordinated Assessment Services for the Exceptional (C.A.S.E.)  
(780) 539-0333

# Glossary of Key Terms

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**Accommodations** are “a change or alteration in the regular way a student is expected to learn, complete assignments or participate in classroom activities. Accommodations include special teaching or assessment strategies, equipment or other supports that remove, or at least lessen, the impact of a student’s special education needs.” (*Individualized Program Planning 2006*)

**Adaptations** “refer to ongoing, instructional support that may be either planned or informal, and are generally not recorded in the IPP.” (*Individualized Program Planning 2006*)

**Amplification** is a process that makes sounds louder.

**Assistive technology** is “technology used by individuals with disabilities in order to perform functions that might otherwise be difficult or impossible. Assistive technology can include mobility devices such as walkers and wheelchairs, as well as hardware, software, and peripherals that assist people with disabilities in accessing computers or other information technologies.” (National Center on Accessible Information Technology in Education)

**Audiologists** are university-trained professionals with a masters or doctorate degree who specialize in the science of hearing. “Audiologists assess the extent of hearing loss, balance and related disorders and recommend appropriate treatment. Services are provided to people who are deaf or hard of hearing and persons at risk of hearing loss due to noise exposure, genetic causes, and exposure to certain drugs, or middle ear infections. Audiologists also work with adults and children who need aural rehabilitation, such as auditory training and speech reading, and educate consumers and professionals on the prevention of hearing loss.” (Canadian Association of Speech-Language Pathologists and Audiologists)

**Educational audiologists** “specialize in the management of hearing and hearing impairment within the educational environment” (Educational Audiology Association). They participate in multidisciplinary team meetings, provide information and training to staff and families, liaise between the educational and medical communities, provide strategies for effective use of personal and classroom-based amplification, and promote appropriate listening/learning environments.

**Auditory training** is a structured process used to train people to use their residual hearing and amplification technology for comprehending environmental sounds and spoken language. The four levels in the process are detection, discrimination, identification and comprehension.

**Bilingual/bicultural education for deaf students** describes programs that utilize dual language (ASL and English) instruction and “reflect an empowering environment for Deaf students where Deaf and hearing staff model respect for one another, collaboration in decision making and advocacy for the rights of Deaf individuals within and outside of the school system. While there are many different models of how bilingual/bicultural education could be implemented, all of them must have at their basis a structure that reflects Deaf empowerment. This necessitates a model that incorporates the school environment, the residence, the home, the Deaf community and the hearing community. Together they can create an enriching bilingual/bicultural experience to encourage Deaf students who take active roles in their communities as empowered citizens of our society.” (Canadian Cultural Society of the Deaf)

**Closed Captioning** is a technology that encodes captions within video programs. “Like subtitles on movies, captions are transcriptions of the spoken word into a written form that permit deaf and hard of hearing people to see what they cannot hear. Unlike subtitles, captions also provide descriptions of sounds, such as a bell ringing or a door slamming. Closed captions are hidden within normal television broadcasts and on videotapes and DVDs. There's no special service to subscribe to in order to receive the captions. Rather, captioning is made free for all viewers by the television and home video industries and with the support of grants and donations.” (National Captioning Institute Incorporated)

**Cochlear implant** is “a small, complex electronic device that can help to provide a sense of sound to a person who is profoundly deaf or severely hard of hearing. The implant is surgically placed under the skin behind the ear. An implant has four basic parts: a microphone, which picks up sound from the environment; a speech processor, which selects and arranges sounds picked up by the microphone; a transmitter and receiver/stimulator, which receive signals from the speech processor and convert them into electric impulses; and electrodes, which collect the impulses from the stimulator and send them to the brain. An implant does not restore or create normal hearing. Instead, under the appropriate conditions, it can give a deaf person a useful auditory understanding of the environment and help him or her to understand speech.” (National Institutes of Health, U.S Department of Health and Human Science)

**Literacy** is the ability to read and write.

**Personal Frequency Modulated (FM) System** is a personal assistive listening device that transmits the speaker's voice through a microphone to the listener wearing the corresponding FM receiver. The receiver is connected to the listener's personal hearing aid or cochlear implant. It increases loudness of the speaker's voice and reduces the negative effects of background noise.

**Pragmatics** is the study of how language is used in different situations for varying purposes. It encompasses the rules of conversation and the appropriate use of language in social situations, such as how to initiate, enter, maintain, and terminate conversations; how to take turns; how to respond appropriately; and how to tell a cohesive narrative. Social competence also includes choosing different language and tone when talking to various listeners (e.g., teachers, friends, family).

## **Realtime Transcription**

**CART**—Computer Assisted Real-Time Transcription (Alexander Graham Bell Association for the Deaf and Hard of Hearing); Communication Access Realtime Translation (National Court Reporters Foundation); Computer Aided Realtime Translation (National Technical Institute for the Deaf)—“is the instant translation of the spoken word into text performed by a CART reporter using a stenotype machine, notebook computer and realtime software. The text is then displayed on a computer monitor or other display device for the student who is deaf or hard of hearing to read.” (National Technical Institute for the Deaf)

**TypeWell** transcription system refers to a hearing transcriber who uses a notebook computer with abbreviation software to “transcribe meaning-for-meaning what is said in class lectures and discussions.” Students “read the transcription in real-time from a second computer. He or she can also type questions and comments to the transcriber to be voiced, and even take their own notes on the second computer. The transcriber usually does not type every word that is said, but rather may condense the language used while

maintaining the full meaning intended by the speaker. Many TypeWell transcribers DO transcribe nearly verbatim what is said. However, false starts, immediate repetitions, etc. are left out.” TypeWell is used in secondary and post-secondary schools. (The National TypeWell Educational Transcription System).

**Semantics** is the study of meaning in language, which can occur at the letter, word, phrase, sentence and multiple sentence level.

**Sign language interpreters** possess post-secondary training and certification to perform the task of interpreting between two languages, such as spoken English and American Sign Language. Interpreters are members of professional associations and are governed by strict codes of ethics and guidelines for professional conduct. The Association of Visual Language Interpreters of Canada is a national professional association which represents interpreters whose working languages are English and American Sign Language. The provincial association is the Alberta Chapter of Registered Interpreters of the Deaf (ACRID).

**Sound field system** “is an assistive device that improves listening in noisy or reverberant environments like classrooms. Like a mini loud-speaker system, a sound field system amplifies the decibel level of a teacher's voice. Small speakers in the classroom bring the enhanced loudness to all students” (Alexander Graham Bell Association for the Deaf and Hard of Hearing). Teachers speak into the microphone of the sound field system.

**Speech–language pathologists** are university-trained professionals, usually with a masters degree or doctorate, who “may work alone or as part of a team to help individuals of all ages to communicate effectively and to eat and swallow safely. The role of the S-LP is to identify, assess, evaluate, treat, manage, educate and help to prevent language, speech, voice, fluency, cognitive, and other related communication disorders, as well as swallowing problems.” (Canadian Association of Speech–Language Pathologists and Audiologists)

**Syntax** is the order or arrangement of words and sentences within a language. The order creates meaning both within a single sentence and between sentences.

**Teacher of the Deaf (D) and Hard of Hearing (HH)** is a university-trained teacher at a graduate level, with a diploma, masters degree or doctorate specializing in the education of students who are deaf or hard of hearing. Teachers may be members of the Canadian Association of Educators for Deaf and Hard of Hearing (CAEDHH). Teachers of D and HH may be accessed by schools through the Regional Educational Consultation Services (listed on page 10) or through other service providers.

### **Transliteration**

**Cued speech transliterators** attempt to provide visual equivalents for “auditory information available to hearing people in a shared environment.” (National Cued Speech Association) (For more information, see Cued Speech in Appendix A.)

**Oral transliterators** “communicate the words of a speaker or group of speakers to an individual who is deaf by inaudibly mouthing what is said so that it can be read on the lips.” (Alexander Graham Bell Association for the Deaf and Hard of Hearing)

**Transliterator** is a term used by the American organization Registered Interpreters for the Deaf (RID) to designate someone who has completed a Certificate of Transliteration (CT) and has demonstrated the ability to transliterate between English-based sign language and

spoken English in both sign-to-voice and voice-to-sign. A CT does not qualify an individual to interpret between English and ASL. RID also provides a Certificate of Interpretation (CI), which provides for interpretation between English and ASL in both sign-to-voice and voice-to-sign. RID refers to an individual who is certified with both the CT and CI as an interpreter.

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Microsoft Security Essentials (MSE) is an antivirus software (AV) product that provides protection against different types of malicious software, such as computer viruses, spyware, rootkits, and trojan horses. Prior to version 4.5, MSE ran on Windows XP, Windows Vista, and Windows 7, but not on Windows 8 and later versions, which have built-in AV components known as Windows Defender. MSE 4.5 and later versions do not run on Windows XP. The license agreement allows home users and small businesses to... The essential plugin suite for Minecraft servers. Contribute to EssentialsX/Essentials development by creating an account on GitHub.Â Running /editsign clear 1 will clear the first line of the sign. Running /editsign clear will clear the entire sign. Note: to use formatting in /editsign, you need the essentials.editsign. permissions - see the Color Permissions wiki page for more information. New /itemlore command (#3331). You can now create and modify lore on items using the /itemlore command! Essentials\_ is a plugin filled with over 80 essential commands and other things such as compassposition and clock for servers to use. Almost all of the plugin is customizable including, join/leave messages, player name format and much more. Essentials\_ will soon be having an economy implemented and Essentials\_ will be updated regularly with new essential commands and essential features for a server. Essentials offers over 100 commands useful on just about every Minecraft server, from kits to mob spawning. Essentials is the de-facto standard set up for Minecraft servers. From small servers running on desktops, VPS hosts and dedicated Minecraft services. Essentials is one of the most popular Bukkit plugins ever made, and runs on everything from small one person home hosted Windows servers, to huge 500+ slot dedicated Linux community servers. <http://wiki.mc-ess.net/build/img.png>. Essentials Breakdown. About EssentialsX EssentialsX is the essential plugin suite for Spigot servers, including over 130 commands and countless features for servers of any scale! EssentialsX is a continuation of the original Essentials 2 plugin for Bukkit servers, adding support for the latest Minecraft versions. EssentialsX also includes several performance enhancements and fixes on top of the original Essentials, as well as plenty of new useful features for servers.