Low-Incidence Disabilities

Assistive Technology for Low-Incidence Disabilities
- Blindness
- Low vision
- Deafness
- Hard-of-hearing
- Deaf-blindness
- Significant developmental delay

**Low vision** is a visual impairment, not correctable by standard glasses, contact lenses, medicine, or surgery, that interferes with a person's ability to perform everyday activities.

**Deafness or Hard-of-Hearing** is a student who exhibits a hearing loss, whether permanent or fluctuating, that interferes with the acquisition or maintenance of auditory skills necessary for the normal development of speech, language, and academic achievement. [Refer to 34 CFR 300.7 (3), (5)]

**Deaf-Blindness** is 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.

**Significant Developmental Delay** is a delay in a child's development in adaptive behavior, cognition, communication, motor development or emotional development to the extent that, if not provided with special intervention, the delay may adversely affect a child's educational performance in age-appropriate activities. performance in age-appropriate activities. ages three through nine (the end of the school year in which the child turns nine). [See 34 C.F.R. § 300.8(b)]

**Blindness** is a lack of vision. It may also refer to a loss of vision that cannot be corrected with glasses or contact lenses. Partial **blindness** means you have very limited vision. Complete **blindness** means you cannot see anything and DO NOT see light.
Blindness and Low Vision: Mobility
The White Cane: A white cane is a device used by many people who are blind or visually impaired. A white cane primarily allows its user to scan their surroundings for obstacles or orientation marks, but is also helpful for onlookers in identifying the user as blind or visually impaired. Guide Dog: A choice of many blind and visually impaired people, the Guide Dog is a specially trained dog that helps a blind/VI person navigate the world.

Enlarging Devices
CCTV (Closed Circuit TV) is a device that typically has a camera and a screen. The visually impaired person puts the paper they are trying to see on a tray under the camera and the camera enlarges the image on a screen similar to a tv or computer monitor. Size and color contrast are a couple of the features on CCTV’s that help the visually impaired see the material.

Handheld magnifiers are typically small, portable devices that can be used to enlarge small print or picture areas such as a restaurant menu, paper money, etc. Handheld magnifiers come in several sizes and many have light options.

Braille
Braille is a system of raised dots that is used by the blind and visually impaired to read and write. The Perkins Braille Writer: Almost every blind/VI child’s first experience with creating Braille happens on a Perkins Braille writer. The Perkins Braille Writer looks much like an old typewriter. Electronic Braille Writer: Thanks to evolving technology, many Braille readers/writers choose the more compact, light, and versatile electronic Braille writers. These have a refreshable Braille display and many can connect to a printer to produce “regular” print.

Slate and Stylus: A small, portable system of creating Braille.

Braille Book Resources
Many Braille children’s books are available in a “twin vision” design, meaning there is regular print as well as Braille on the pages. These are a wonderful resource for sighted parents, siblings and teachers to share a book with a blind child.

Computer Assistive Technology
Screen readers: Examples are: (JAWS, ZOOMTEXT)

Screen enlarging software: Allows the blind/VI user to enlarge the screen of the computer as well as enlarge key components such as the pointer or cursor.

Portable Scanner: Allows blind/VI people to scan a printed document into a computer and then utilize enlarging or document reader technology to access the document.

Dictation Software: Is a type of speech recognition program that converts spoken language to written text.

Deafness and Hard-of-Hearing:

Students who are deaf and hard of hearing using hearing aids or cochlear implants may experience a need for assistive technology (AT). Cochlear implants or hearing aids do NOT create normal hearing for the user. They work best in quiet environments and/or with assistive technology. When considering the use of assistive technology for deaf and hard of hearing students, there are two general categories to investigate—“augmenting devices/systems” and “transforming devices/systems”. Augmenting devices/systems amplify sound, increase signal to noise ratio, while transforming devices/systems convert speech into text.
Assistive Technology

**Augmenting Devices/Systems**
- Personal FM systems
- Sound field systems
- Hearing Loops
- Infrared Systems (IR)
- Other Assistive Listening Devices
- Audio-visual FM Systems
- Amplified Telephones

**Transforming Devices/Systems**
- Translation Services
- Accessible Instructional Materials (AIM)
- Captioning Services for video/audio productions
- CART (communication access real-time)
- Face to Face Communication Systems
- Text and other Adaptive Telephones (TTY)

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**Significant Developmental Delay:**

*Significant Developmental Delay* is a delay in a child’s development in adaptive behavior, cognition, communication, motor development or emotional development to the extent that, if not provided with special intervention, the delay may adversely affect a child’s educational performance in age-appropriate activities.

**Assistive Technology:**


- Low seating equipment to promote socialization
- Adapted tools for writing, eating
- Adapted positioning equipment

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**Curriculum Tools**

- Adapted books and educational material
- Alternate spinner
- Switch access computer and electronic devices with functional apps and software
- Talking books

**Environmental Control**

- Power Link
- Switches
- Switch latch and switch timer

**Switch Toys (develop cause and effect)**

**Switches and Switch Mounts**

**Mats (for rolling and exploring)**

**Felt Boards for language activities and hand-held manipulative**

**Sensory toys (fans, lights, vibrations, noise)**