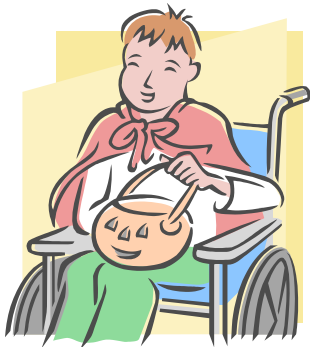


## ASSISTIVE TECHNOLOGY & THE YOUNG CHILD

Children with disabilities and chronic health conditions may have limited opportunities to independently explore and interact with their world. If solutions are not found to provide these opportunities, they may fall behind in their intellectual and social growth. Assistive technology



(AT) can be part of the

solution if those around the child are aware of its potential and benefits and include it in the child's life as early as possible. Consider what activities children are typically doing at a certain age and find a way for children with disabilities to engage in those same activities.

**Communication and language** growth is significant in the first years. Augmentative communication devices help children with speech impairments communicate their needs and ideas to family, friends, and other people in the community. Devices can range from simple picture boards to computer systems with voice output. Each device needs

to be individualized for the child and their abilities.

The childhood **mobility** milestones of rolling, sitting, crawling, and walking can also be supported through AT. Examples of devices to assist in motor development include: positioning devices, standing frames, scooters and power chairs.

Positioning devices such as wedges help children participate more independently and safely. Wedges facilitate arm movements for grasping, reaching, and holding things. Sitting or standing aides allow hands and arms to be free for other things, like holding toys or blowing bubbles in the bathtub. Scooters and power wheelchairs allow independent exploration of the environment.

If **play** is the work of children, then AT is a necessary tool to help them do their important work. Children need to manipulate toys and engage in play to understand how things work and develop turn taking, sharing, and decision making skills. Toys adapted for switch use or customized with special knobs or other materials afford children these opportunities. Infant and toddler sensory stimulation toys are available or can be adapted to accommodate for most vision and hearing losses. For example, a beeping ball allows a child with limited vision to play catch with friends and family. Adapted

computer activities address critical thinking, creativity, and other learning skills by providing a flexible and interactive environment. Aside from the standard keyboard there are many other ways young children can control the computer, such as special keyboards, touch screens, pointing devices and/or switches.

There are many different types of **switches** for children. Using switches, children can control toys, games, wheelchairs, appliances, lights, and computers. Switches come in all different sizes, shapes, and colors. Children can control them by voice, small or large movements of almost any body part, movement of the head or eyes, and by blowing puffs of air into a straw.

AT can make the **home environment** more "friendly" and accessible to the child. Independence can be realized with door levers, light switch extenders, a ramped bed, wider doorways, and lower shelves. Blinking lights can signal someone is at the door or the telephone is ringing.

**Dressing and eating** can be managed independently through a variety of devices. Adaptations and devices to help children dress themselves include a dressing stick, easy to grasp zipper pulls and Velcro replacing zippers and buttons. Adapted utensil

handles and plates with built-up edges permit children to feed themselves. Adapted cups can have special handles, lids, and cut-out sections to prevent pressing on the nose of a child unable to tip their head when drinking.

Many **transportation** issues are solved by AT. All children need to be secured safely when traveling in the family car. Children with special needs can utilize specially designed car seats and seat belt systems. The family vehicle can be equipped with wheelchair lifts and strap-down systems.

### **Funding**

The Individuals with Disabilities Education Act (IDEA), includes Part C-Early Intervention- Children birth to 3. The Individual Family Service Plan (IFSP) is the tool that is used to plan, implement and evaluate progress for a child receiving services under IDEA – Part C. It is also a written commitment on the part of the early intervention program to provide specified services including AT. The IFSP must be reviewed, revised, and updated at least annually. The child's need for AT must be assessed and determined on an individual basis by the IFSP team.

The determination of need to provide AT devices and services is based upon whether the child requires AT to improve function and to help them participate more

fully in activities in the home, at preschool, and in the community.

The IFSP team can determine if an AT evaluation is necessary for the child in order to identify needed AT services and devices to accomplish his/her goals. Assistive technology evaluations usually involve a team approach. Team members come from different disciplines and can vary from team to team depending on the child's abilities and needs. Traditionally, the child, the parents or other significant family members, medical personnel, early childhood special educator, AT specialist, occupational therapists, physical therapists and/or speech and language pathologists, are members of the team. A systematic AT evaluation is a process that will ensure that decisions regarding the selection of AT devices are based on information regarding the child's abilities, needs, and environments. The AT evaluation process is characterized by a team approach, functional assessment techniques, and is ongoing in nature. Although most AT evaluations are not standardized, the assessment process should be systematic and utilize a framework for effective decision making.

**When** do you consider AT for children? As early as possible! Consider technology solutions when a

gap between understanding and expressing abilities is emerging; when the child's performance falls behind that of his educational peers; when a physical disability is impeding the cognitive development of a child; and/or when a disability is impeding the independence of a child.

**Next Steps:** Using assistive technology provides the opportunity for young children with disabilities to develop their physical, intellectual and social skills. A simple first step is to contact the **Arizona Technology Access Program**.

Visit our website at [www.aztap.org](http://www.aztap.org), or call



800-477-9921,  
602-728-9534;  
602-728-9536 (TTY) Email  
[askaztap@nau.edu](mailto:askaztap@nau.edu)

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56 statewide Assistive Technology (AT) Programs form a national network of statewide assistive technology (AT) programs. Information contained in this document represents the accumulation of knowledge of this national network. In Arizona this program is known as the Arizona Technology Access Program (AzTAP).

**AzTAP is a Phoenix-based program of the Institute for Human Development at Northern Arizona University.**

