

Assistive Technology in the Classroom

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[Objectives]

- Define Assistive Technology and associated terminology
- Introduce the IEP process
- Identify categories of AT with examples of equipment
- Introduce training opportunities and certifications
- Provide info regarding AT resources
- A vision of the future of AT

[What is Assistive Technology?]

The Individuals with Disabilities Education Act

IDEA '97 (Public Law 105-17) mandates the provision of assistive technology and offers clear definitions of assistive technology devices and services.

[Definition]

Assistive Technology Devices

Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized that is used to increase, maintain, or improve the functional capabilities of children with disabilities. (Section 300.5)

[Definition]

Assistive Technology Services

- Any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device. (Section 300.5)
- Evaluating
- Providing devices
- Selecting, Designing, Customizing
- Maintaining, Repairing
- Coordinating
- Training/Technical Assistance –student, family and school service providers

[IEP Team]

- Student, Parents
- Assistive Technology Specialist
- Special Education Teacher
- General Education Teacher
- Occupational Therapist, Speech and Language Pathologist, Physical Therapist,
- School Administrator
- School Psychologist

[AT support for IEP]

- Positioning
- Physical access for learning tools/computers
- Writing (Physical and Composition)
- Math
- Reading
- Learning/Studying
- Organization
- Communication
- Specific sensory deficits
- Aids for Daily Living

[Positioning]

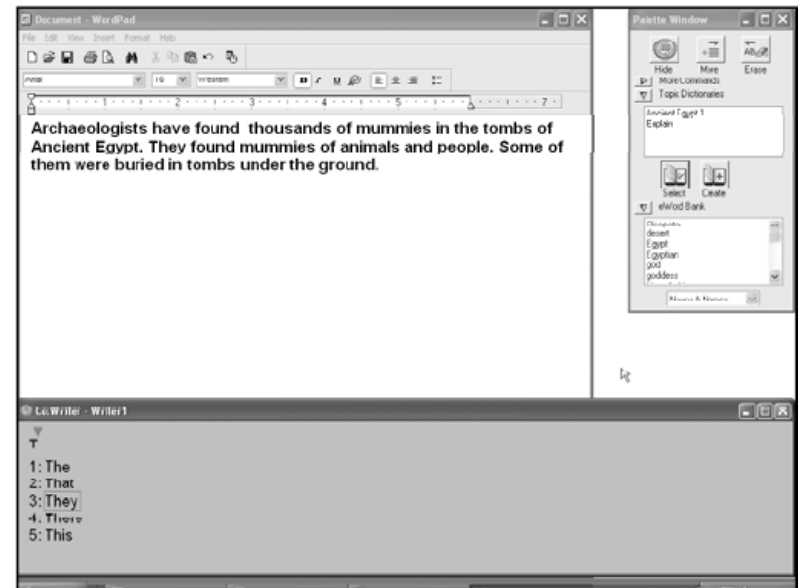


[Physical Access to Computers]



Writing

- Low-tech writing aids
 - High-tech software assists
- example:
Co:Writer from Don Johnston



[Math]

- Visually enhanced calculator
- Talking calculator
- Talking scientific calculator



[Reading]

- Low-tech solutions
- High-tech hardware
- Text-to-Speech and Scan-and-Read software (OCR)



[Learning / Studying]

- Internet



- High-tech software solutions



Example: WYNN from Freedom Scientific

[Organization]

- Bar code identification
- Braille tags
- Watches with reminders
- Software assists...signals, reminders, scheduling programs
- Hand held recorders

Communication

- Low-tech communication board
- AAC: Alternative and Augmentative Communication

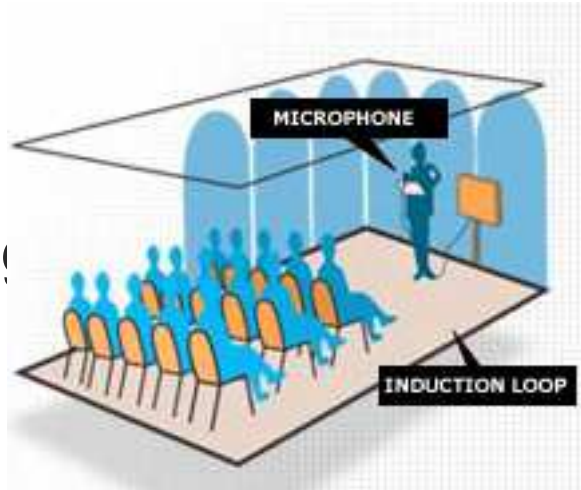
Independent devices and computer based software



Sensory Deficits

■ Hearing

- Alerts, signals
- Assistive Listening Device (ALD)
 - Personal FM
 - Induction Loop
- Captioning



■ Vision

- Magnifiers
- Readers
- CCTV
- Braille



Aids for Daily Living

- Special handles for classroom utensils
- Special switches
- Reachers
- Chalkboard options
- Special toilet needs



[Major Categories of AT]

- Aids for Daily Living
- Communication
- Computing
- Mobility, Seating and Positioning, & Adapted Transportation
- Sensory Aids

[Aids for Daily Living]

- Home accommodations
 - Utensils and tools
 - Lifts, elevators, ramps
 - Bathroom assists
 - Home modifications
- Workplace or school accommodations
 - Special workstations
 - Ergonomic equipment

Utensils and Tools

Low Tech



- Eating Implements
- Kitchen Utensils
- Tools
- Modification types
 - Straps
 - Weights
 - Ergonomic handles



Utensils and Tools High Tech

- Assistive feeding machines
- Barcode scanners for grocery items



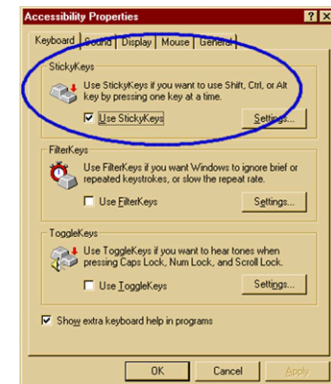
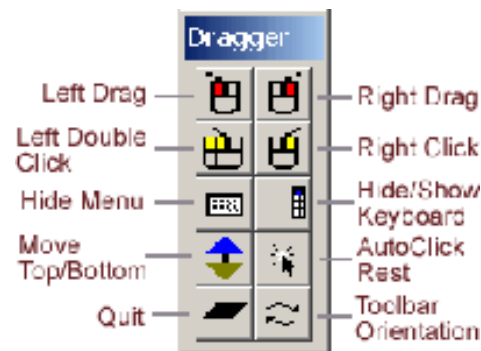
[Communication]

- AAC: Alternative and Augmentative Communication
 - Digital Speech
 - Recorded speech
 - Independent devices
 - Computer based software



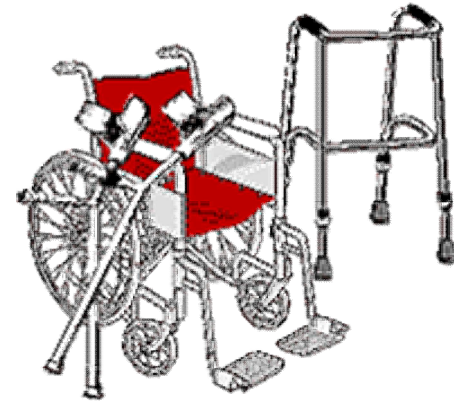
Computers

- Input Devices
- Output Devices
- Ergonomics
- Keystroke Reduction
- Accessibility Issues



[Mobility]

- Support canes
- White canes
- Walkers
- Manual wheelchairs
- Scooters
- Power wheelchairs



[Sensory Aids]

- Hearing
 - Alarms, alerts
 - TTY Phones (TDD)
 - Captioning
- Vision
 - Talking Devices
 - Bar Code organization
 - Magnifiers

[AT Certifications]

- Assistive Technology assessments typically performed by a PT or an OT
- RESNA :
 - Assistive Technology Practitioner (ATP)
 - Assistive Technology Supplier (ATS)
- ATACP (online from CalState Northridge)
 - Assistive Technology Applications Certificate Program
- Certificate in Assistive Technology
 - Graduate programs in BioMedical Engineering

[The Future of Assistive Technology]

- Universal Design
- Moore's Law
- Convergent Technologies
- Emerging Technologies
- Virtual Reality
- Neuroprosthetics