

# Assistive Technology for Students with Disabilities



New York State Education Department  
Office of Special Education  
May 2016

# Overview of Assistive Technology Topics

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- ▶ **Assistive Technology Devices and Services**
- ▶ **The Assistive Technology Process**
  - ▶ Consideration
  - ▶ Evaluation
  - ▶ Documentation
  - ▶ Provision and Implementation
  - ▶ Family Involvement
  - ▶ Training and Professional Development
  - ▶ Student Involvement
- ▶ **Assistive Technology, Accessible Materials and Universal Design for Learning**
- ▶ **State-of-the-Art Assistive Technology**

# New York State's Blueprint for Improved Results for Students with Disabilities

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*Students engage in self-advocacy and are involved in determining their own educational goals and plan.*

*Parents, and other family members, are engaged as meaningful partners in the special education process and the education of their child.*

*Teachers design, provide, and assess the effectiveness of specially designed instruction to provide students with disabilities with access to participate and progress in the general education curriculum.*

**Students' individualized needs for assistive technology devices and services are considered and accommodated.**

*Schools provide multi-tiered systems of behavioral and academic support.*

*Schools provide high quality inclusive programs and activities.*

*Schools provide appropriate instruction for students with disabilities in career development and opportunities to participate in work-based learning.*

# What is an Assistive Technology Device?

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- ▶ Any item, piece of equipment, or product system, whether acquired commercially or off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a student with a disability
- ▶ Not a medical device that is surgically implanted, or the replacement of such device



# What is an Assistive Technology Service?

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- ▶ Any service that directly assists a student with a disability in the selection, acquisition, or use of an assistive technology device. The term includes –
  - ▶ Evaluation
  - ▶ Acquisition
  - ▶ Necessary modifications and customization
  - ▶ Coordination of assistive technology (AT) with other services
  - ▶ Training

# What Educational Challenges Can Assistive Technology Address?

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Seating,  
Positioning and  
Mobility

Reading

Writing

Computer  
Access

Communication

Mathematics

Organization

Vision

Hearing

Recreation and  
Leisure

Feeding

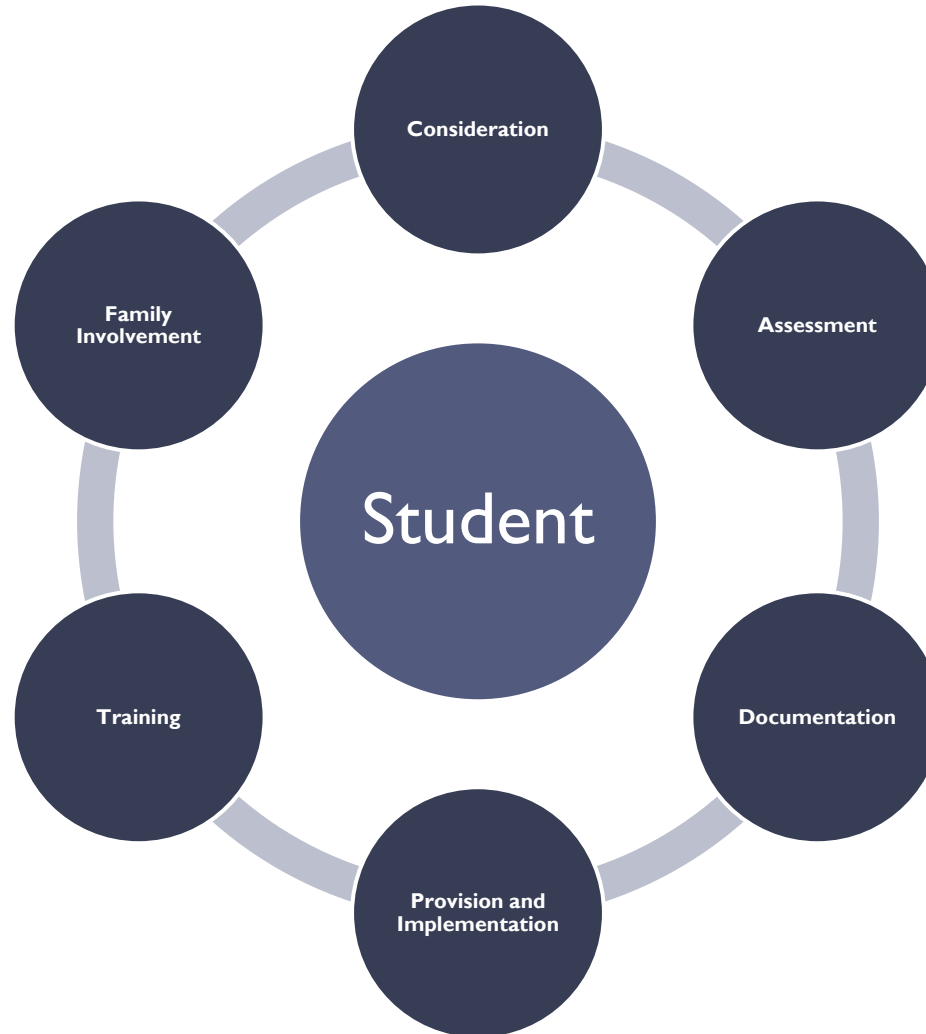
# The Assistive Technology Process

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- ▶ Assistive technology is a *process*.
- ▶ Assistive technology is driven by the student, not the device.
- ▶ The process does not stop when a student is provided with a device.

# The Assistive Technology Process: Essential Components

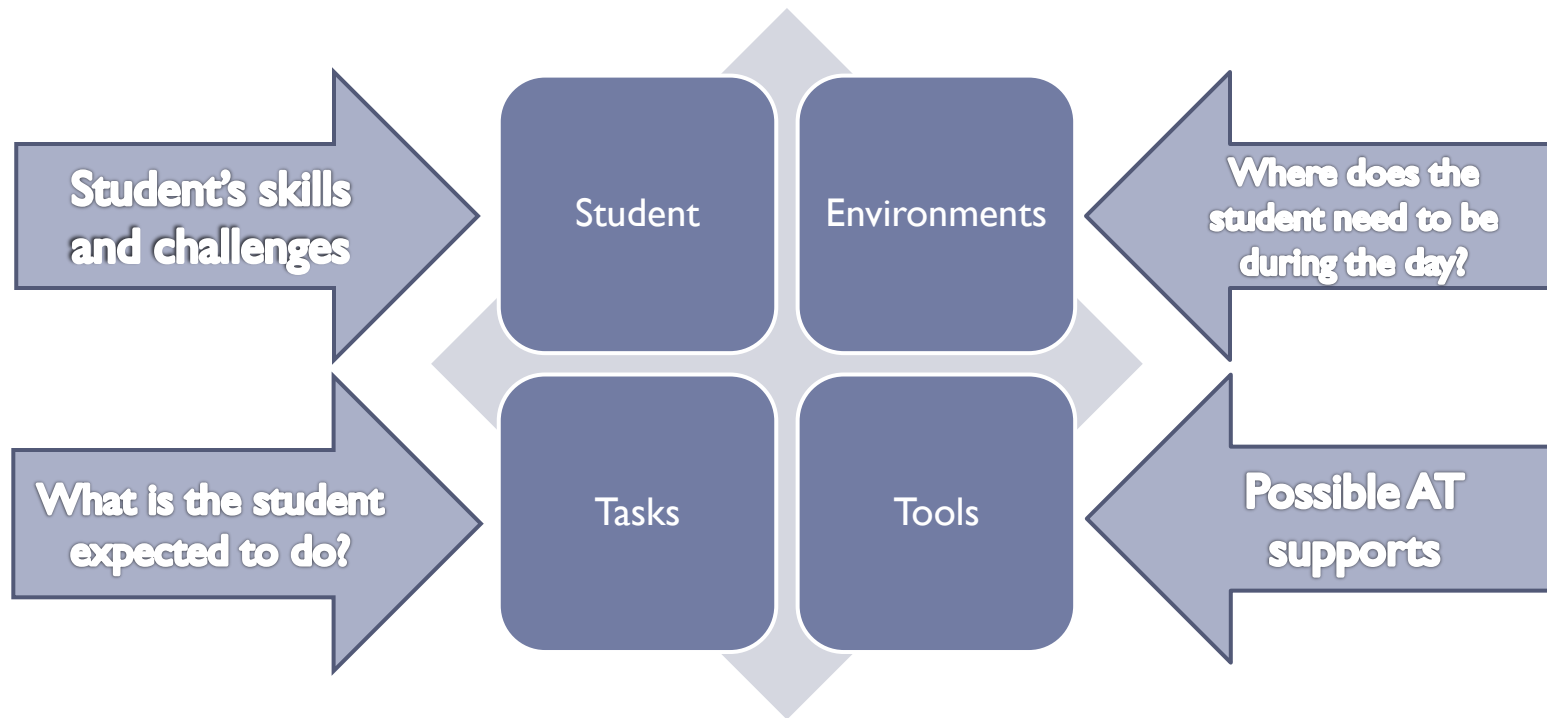
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# The Assistive Technology Process: Consideration

- ▶ Effective consideration of assistive technology for a student with a disability should include a team discussion that is focused on the student's individual needs.



# Assistive Technology Consideration Checklist

## Assistive Technology (AT) Consideration Checklist

This checklist was designed to support Committees on Special Education (CSEs) and Committees on Preschool Education (CPSEs) in their thorough consideration of AT devices for students with disabilities. The AT devices included on this checklist are not exhaustive, so CPSEs/CSEs are encouraged to make other student-specific considerations outside of the items on this checklist if necessary. This checklist is for consideration purposes and may be used to support the assessment of an assistive technology device (or devices) for an individual student.

Student: \_\_\_\_\_

Date: \_\_\_\_\_

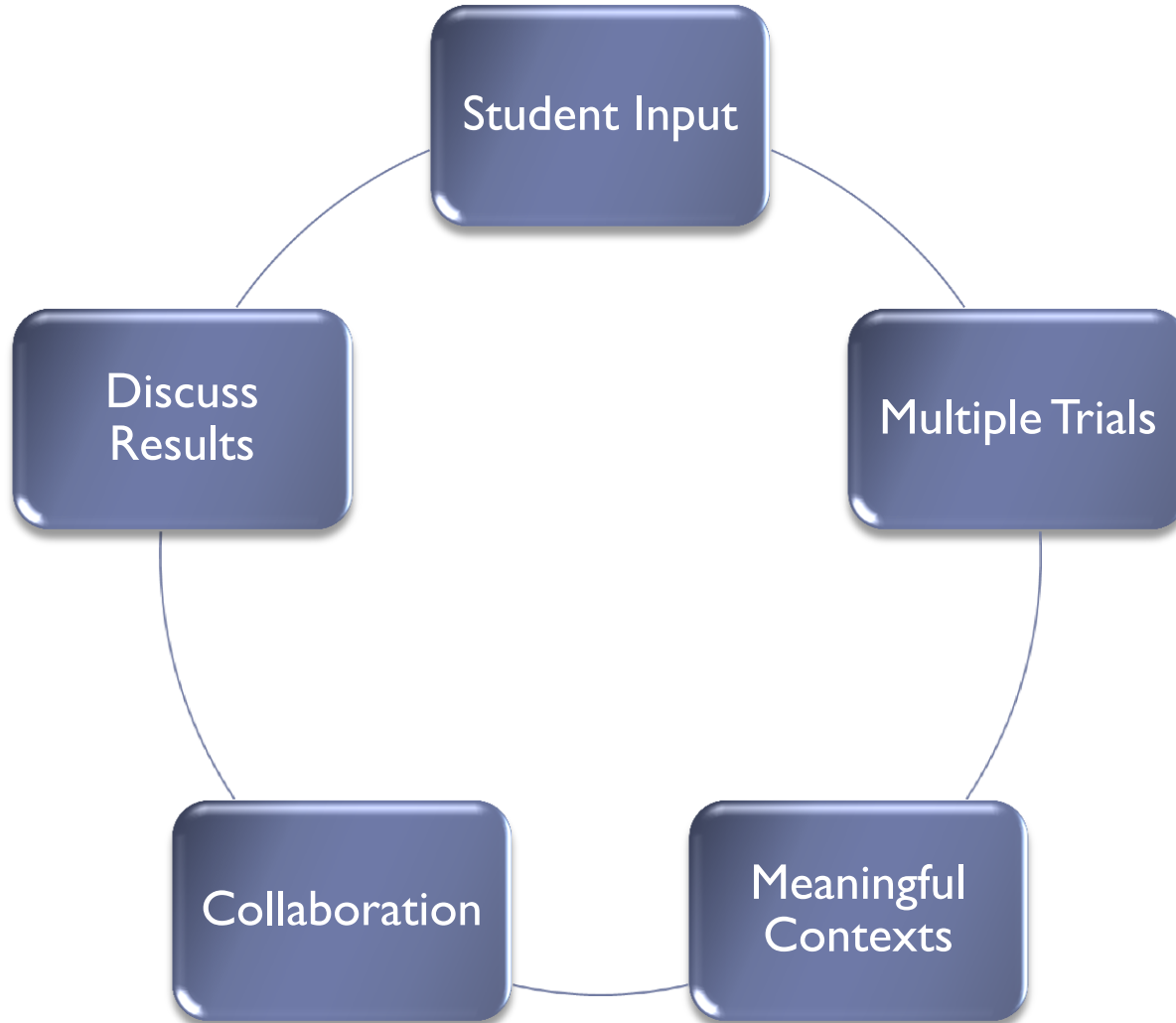
Environments and Tasks	Challenge Areas Related to Tasks	Possible AT Devices
<p>(Check all applicable environments and tasks in which the student may require AT support.)</p> <p><b>Curriculum Tasks:</b></p> <input type="checkbox"/> Instruction <input type="checkbox"/> Independent Work <input type="checkbox"/> Group Work <input type="checkbox"/> Vocational Tasks <input type="checkbox"/> Assessments <input type="checkbox"/> Transitions <input type="checkbox"/> Homework <p><b>Physical Tasks:</b></p> <input type="checkbox"/> Building Navigation <input type="checkbox"/> Materials Manipulation <input type="checkbox"/> Equipment Use <p><b>Social Tasks:</b></p> <input type="checkbox"/> Communicating with Others <input type="checkbox"/> Participating in Extracurricular Activities <input type="checkbox"/> Peer Interaction <input type="checkbox"/> Game-Play <p><b>Safety Tasks:</b></p> <input type="checkbox"/> Safety Drills <input type="checkbox"/> Building Safety <input type="checkbox"/> Bus Safety <input type="checkbox"/> Equipment Safety <p><b>Environments:</b></p> <input type="checkbox"/> General Education Classrooms <input type="checkbox"/> Special Education Classrooms <input type="checkbox"/> Hallways <input type="checkbox"/> Outdoor Activity Areas <input type="checkbox"/> Assembly Spaces <input type="checkbox"/> Cafeteria/Meal Spaces <input type="checkbox"/> School Bus <input type="checkbox"/> Job Sites <input type="checkbox"/> Field Trips <input type="checkbox"/> Home <p><b>Other Tasks/Environments not listed:</b>            _____</p>	<p>(Check "Independent" if the student functions adequately with standard classroom tools. Check "Consider AT" if additional support may be needed.)</p> <p><b>Seating, Positioning &amp; Mobility</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Reading</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Writing</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Computer Access</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Communication</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Mathematics</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Organization</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT	<p>(For areas in which "Consider AT" is chosen in the preceding column, indicate any possible AT devices the CPSE/CSE may wish to consider when assessing the student's AT needs.)</p> <p><input type="checkbox"/> alternative/adapted chair or desk  <input type="checkbox"/> stander  <input type="checkbox"/> stabilizing supports  <input type="checkbox"/> grab bar/hand rail  <input type="checkbox"/> walking supports  <input type="checkbox"/> wheeled devices</p> <p><input type="checkbox"/> reading window  <input type="checkbox"/> handheld voice-output reading device for printed documents  <input type="checkbox"/> text-to-speech software/app  <input type="checkbox"/> pictures/picture symbols added to text  <input type="checkbox"/> scanner with Optical Character Recognition (OCR)  <input type="checkbox"/> other</p> <p><input type="checkbox"/> pencil grips*  <input type="checkbox"/> hand/wrist stabilizer*  <input type="checkbox"/> adapted paper*  <input type="checkbox"/> slant board*  <input type="checkbox"/> spell check feature/device  <input type="checkbox"/> word-prediction software</p> <p><input type="checkbox"/> Microsoft/Mac accessibility options  <input type="checkbox"/> adapted/Alternative keyboard  <input type="checkbox"/> adapted/Alternative mouse  <input type="checkbox"/> switch interface</p> <p><input type="checkbox"/> pictures/symbols  <input type="checkbox"/> communication boards  <input type="checkbox"/> voice output device with picture icons/overlays  <input type="checkbox"/> voice output device with steps for sequencing messages  <input type="checkbox"/> voice output device with dynamic displays  <input type="checkbox"/> written/typed communication  <input type="checkbox"/> text-based device with speech production</p> <p><input type="checkbox"/> manipulatives  <input type="checkbox"/> abacus  <input type="checkbox"/> talking calculator  <input type="checkbox"/> adapted math paper  <input type="checkbox"/> on-screen calculator  <input type="checkbox"/> voice recognition software/app with math recognition</p> <p><input type="checkbox"/> sensory/regulatory supports  <input type="checkbox"/> sticky items (low-tech or digital)  <input type="checkbox"/> highlighter (low-tech or digital)  <input type="checkbox"/> handheld scanner/scanning pen  <input type="checkbox"/> electronic organizer  <input type="checkbox"/> dividers/bins/color coding for desk/locker/cubby</p> <p><input type="checkbox"/> other</p> <p><input type="checkbox"/> voice recognition software/app  <input type="checkbox"/> word processor  <input type="checkbox"/> adapted pens/utensils*  <input type="checkbox"/> electronic dictionary/thesaurus  <input type="checkbox"/> scanner  <input type="checkbox"/> typing program with voice output  <input type="checkbox"/> other  <small>* utensil modifications for art class, as well as drawing/painting, etc.)</small></p> <p><input type="checkbox"/> arm stabilization  <input type="checkbox"/> touch screen  <input type="checkbox"/> eye gaze access  <input type="checkbox"/> other</p>

Environments and Tasks	Challenge Areas Related to Tasks	Possible AT Devices
<p>(Check all applicable environments and tasks in which the student may require AT support.)</p> <p><b>Curriculum Tasks:</b></p> <input type="checkbox"/> Instruction <input type="checkbox"/> Independent Work <input type="checkbox"/> Group Work <input type="checkbox"/> Vocational Tasks <input type="checkbox"/> Assessments <input type="checkbox"/> Transitions <input type="checkbox"/> Homework <p><b>Physical Tasks:</b></p> <input type="checkbox"/> Building Navigation <input type="checkbox"/> Materials Manipulation <input type="checkbox"/> Equipment Use <p><b>Social Tasks:</b></p> <input type="checkbox"/> Communicating with Others <input type="checkbox"/> Participating in Extracurricular Activities <input type="checkbox"/> Peer Interaction <input type="checkbox"/> Game-Play <p><b>Safety Tasks:</b></p> <input type="checkbox"/> Safety Drills <input type="checkbox"/> Building Safety <input type="checkbox"/> Bus Safety <input type="checkbox"/> Equipment Safety <p><b>Environments:</b></p> <input type="checkbox"/> General Education Classrooms <input type="checkbox"/> Special Education Classrooms <input type="checkbox"/> Hallways <input type="checkbox"/> Outdoor Activity Areas <input type="checkbox"/> Assembly Spaces <input type="checkbox"/> Cafeteria/Meal Spaces <input type="checkbox"/> School Bus <input type="checkbox"/> Job Sites <input type="checkbox"/> Field Trips <input type="checkbox"/> Home <p><b>Other Tasks/Environments not listed:</b>            _____</p>	<p>(Check "Independent" if the student functions adequately with standard classroom tools. Check "Consider AT" if additional support may be needed.)</p> <p><b>Vision</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Hearing</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Recreation and Leisure Activities</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Feeding</b></p> <input type="checkbox"/> Independent <input type="checkbox"/> Consider AT <p><b>Other:</b>            _____</p>	<p>(For areas in which "Consider AT" is chosen in the preceding column, indicate any possible AT devices the CPSE/CSE may wish to consider when assessing the student's AT needs.)</p> <p><input type="checkbox"/> large print  <input type="checkbox"/> Braille devices/supports  <input type="checkbox"/> color filters for reading  <input type="checkbox"/> magnifier/magnifying devices (low-tech or electronic)  <input type="checkbox"/> closed captioning  <input type="checkbox"/> high contrast pen  <input type="checkbox"/> large key calculator  <input type="checkbox"/> talking calculator</p> <p><input type="checkbox"/> math manipulatives  <input type="checkbox"/> abacus  <input type="checkbox"/> text-to-speech software/app  <input type="checkbox"/> voice recognition software  <input type="checkbox"/> typing program with voice output  <input type="checkbox"/> audio recorder  <input type="checkbox"/> tactile supports  <input type="checkbox"/> GPS  <input type="checkbox"/> other</p> <p><input type="checkbox"/> classroom amplification  <input type="checkbox"/> FM system  <input type="checkbox"/> infrared system  <input type="checkbox"/> induction loop system  <input type="checkbox"/> voice recognition software (to read another person's spoken message)  <input type="checkbox"/> one-to-one communicator  <input type="checkbox"/> personal amplification  <input type="checkbox"/> visual/vibrating alerting device  <input type="checkbox"/> other</p> <p><input type="checkbox"/> (toy/app) adaptations to toys/games (e.g. Velcro®, magnets, handles, etc.)  <input type="checkbox"/> switch access for toys/games/music  <input type="checkbox"/> arm stabilizers for drawing/painting  <input type="checkbox"/> specialized adapted toys/utensils/manipulatives  <input type="checkbox"/> position aides  <input type="checkbox"/> electronic aids – remote controls, timers, CD/digital music players, speech generating devices  <input type="checkbox"/> online and virtual recreational experiences (e.g. art apps, digital dice, gardening, etc.)  <input type="checkbox"/> adapted sports/outdoor recreation equipment  <input type="checkbox"/> other</p> <p><input type="checkbox"/> adapted feeding utensils  <input type="checkbox"/> adapted bowls/plates  <input type="checkbox"/> adapted cups  <input type="checkbox"/> tray attachment for specialized seating  <input type="checkbox"/> other</p> <p><b>List other tools to consider in the space provided:</b>            _____</p>

Adapted from the Kentucky State Assistive Technology Consideration Guide and the Wisconsin Assistive Technology Initiative (WATI) Assistive Technology Assessment Checklist with acknowledgement to the Wisconsin Department of Public Instruction

# The Assistive Technology Process: Evaluation

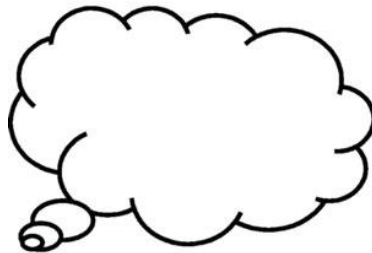
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# **Consider:** Assistive Technology Consideration and Evaluation

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- ▶ How is assistive technology considered for students with disabilities in my school or school district?
- ▶ What processes are used to guide CPSEs/CSEs through effective consideration for assistive technology?



- ▶ How does assessment information help determine next steps in the assistive technology process for each student?

# The Assistive Technology Process: Documentation

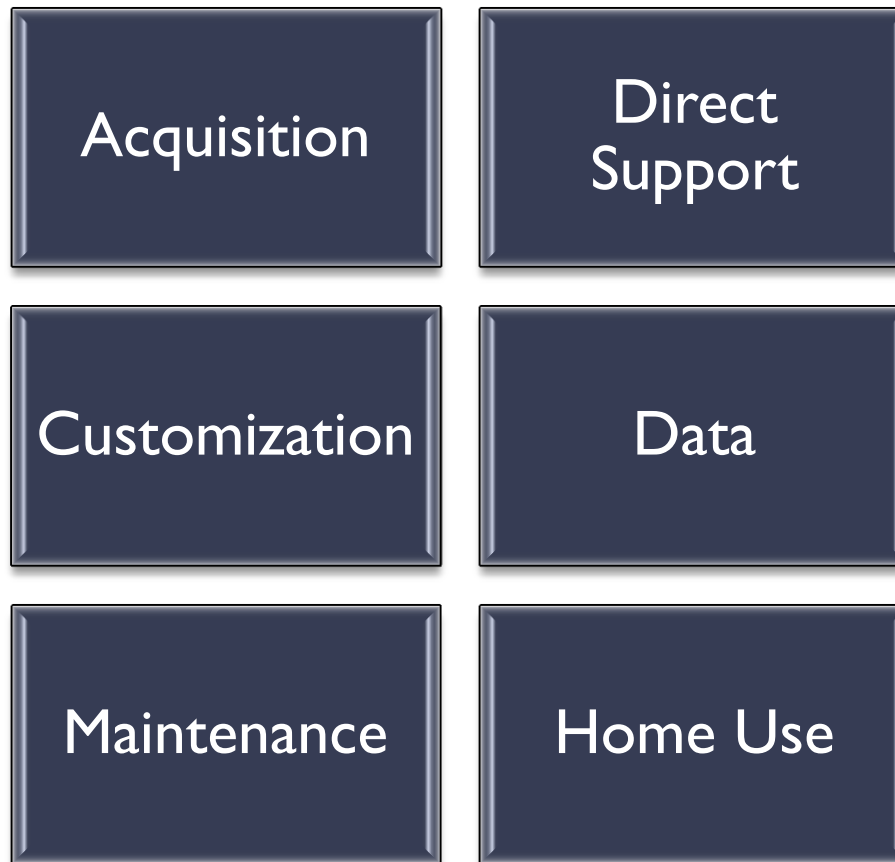
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- ▶ Assistive technology must be documented appropriately in a student's individualized education program (IEP).
- ▶ The IEP must describe any assistive technology devices and/or services needed for the student to benefit from education, including whether the use of a school-purchased assistive technology device is required to be used in the student's home or in other settings.
- ▶ Document the specific assistive technology support required by the student in the IEP, even if the device is generally available in the student's classroom.
- ▶ The continuing need for assistive technology devices/services and recommendations for how assistive technology can assist the student in his or her post-school activities should be included in the Student Exit Summary.

# The Assistive Technology Process: Provision and Implementation

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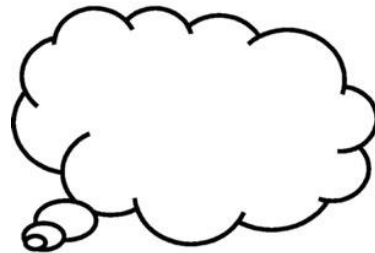
## ▶ Define Roles and Responsibilities



# **Consider:** Assistive Technology Provision and Implementation

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- ▶ How does the CPSE or CSE plan for device acquisition and implementation?
- ▶ Is assistive technology meaningfully integrated in all necessary contexts, including extracurricular activities and home as appropriate?



- ▶ How is progress monitored in order to determine the ongoing effectiveness of assistive technology for individual students?
- ▶ How are the responsibilities of device management and maintenance determined?

# The Assistive Technology Process: Professional Development

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- ▶ Includes special education staff, general education staff, support personnel and administrators
- ▶ Supports an understanding that assistive technology facilitates students' progress and access to the general curriculum
- ▶ Covers all aspects of the assistive technology process
- ▶ Includes ongoing opportunities for learning
- ▶ Leads to changes in practice



# The Assistive Technology Process: Family Involvement

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- ▶ Families play an active role throughout the assistive technology process.
- ▶ Family members provide support for assistive technology at home.
- ▶ Families provide essential insights and perspectives about assistive technology use for their child.
- ▶ Families should be provided with information and support as necessary related to the use of assistive technology.

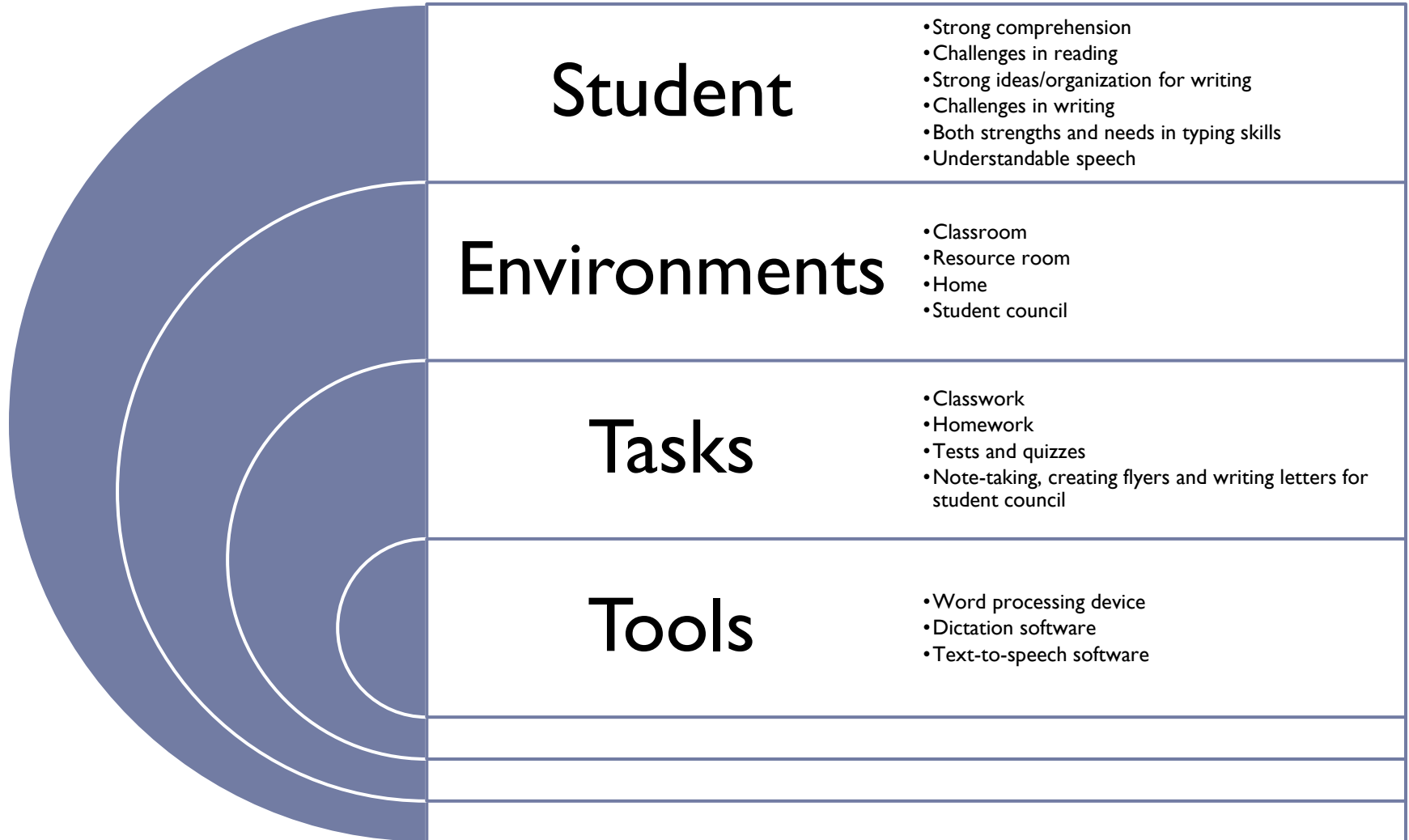
# Meet Molly

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The individuals and events described in this case study are fictitious. Any resemblance to actual persons or events is purely coincidental.

# Meet Molly: SETT Framework



# Meet Molly: Assistive Technology Evaluation Results and Recommendations

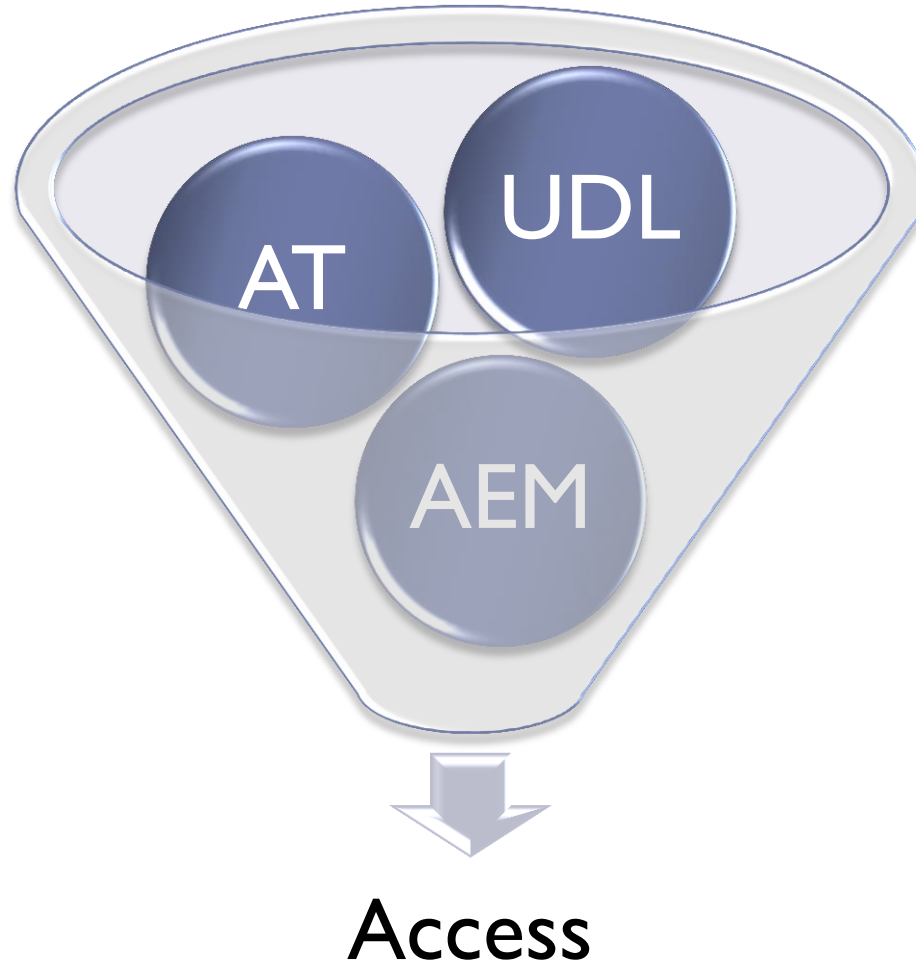
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- ✓ Evaluation results discussed
- ✓ Assistive technology considered
- ✓ Recommended assistive technology devices, services and trainings documented in the IEP

# Assistive Technology in Practice

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# State-of-the-Art Assistive Technology

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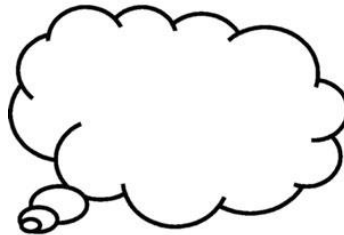


" THE TEACHER TOLD US TO BRING A PENCIL TO CLASS TOMORROW. WHAT'S A PENCIL ? "

# Consider: Assistive Technology in Practice

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- ▶ Consider how assistive technology is incorporated into schoolwide or districtwide technology initiatives.
- ▶ Are CPSEs or CSEs considering a student's need for materials in alternate formats in conjunction with consideration for assistive technology devices and services?



- ▶ Note some examples of the effective integration of both universal design for learning and assistive technology in your school.
- ▶ Are “state-of-the-art” assistive technology devices considered for students with disabilities in your school or district as appropriate to meet a student's individual needs?

# Summary: Assistive Technology

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- ▶ Consider assistive technology for each student with a disability.
- ▶ Evaluate assistive technology for individual students.
- ▶ Document the assistive technology recommended for the student.
- ▶ Provide training and professional development.
- ▶ Assistive technology is driven by the student, not the device.



empower accommodate  
functional individualized  
education support equitable  
collaborate high tech participation  
facilitate SETT achievement  
**assistive technology**  
success low tech ability progress  
engage customize opportunity  
access



# Contact Us

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  - ▶ <http://www.p12.nysed.gov/specialed/contacts.htm>