

AEM Considerations for Learners Working Toward Extended Standards

Shelby Kappler

Wyoming Accessible Educational Materials (AEM)
Clearinghouse

Michael Graham

Occupational Therapy Fieldwork Student



WYOMING
**ACCESSIBLE
EDUCATIONAL
MATERIALS**

Introduction

- Students with complex and multiple disabilities can be challenging to accommodate
- How can we ensure that students are receiving the most effective learning media?
- How do we narrow down the most appropriate assistive technology (AT) or accessible educational materials (AEM)?
- How do we know if the chosen AT or AEM is meeting the student's needs?

Learning Objectives

- Explain the SETT (Student, Environments, Tasks, & Tools) Framework
- Describe the Education Tech Points
- Name at least two WATI (Wisconsin Assistive Technology Initiative) resources





Wyoming Extended Standards

“Providing the essential skills that allow students with the most significant cognitive disabilities to achieve high academic expectations and to access the general academic curriculum.”

“The basis... is to provide a K-12 framework for instruction of students with the most significant cognitive disabilities and to assist school districts, schools, and communities in developing and strengthening curriculum rather than prescribing courses, material, or instructional methodology.”

Extended Standards for Language Arts

- Reading: Students demonstrate understanding of literary and informational texts
 - Students understand that text has meaning
 - Students understand literary texts
 - Students understand informational texts
- Writing: Students apply writing skills to communicate
 - Students apply writing skills
 - Students write expressive and expository pieces

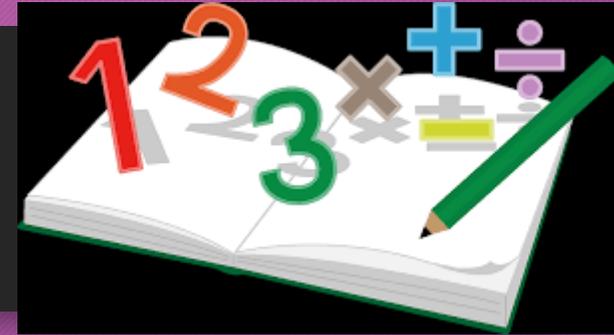


Definitions of Reading and Writing

- Reading
 - “Making meaning of words, pictures, symbols, and/or icons as they are presented to a student or independently encountered by the student.”
- Writing
 - “Expression of thought through words (verbal or written), pictures, symbols, and/or icons.”



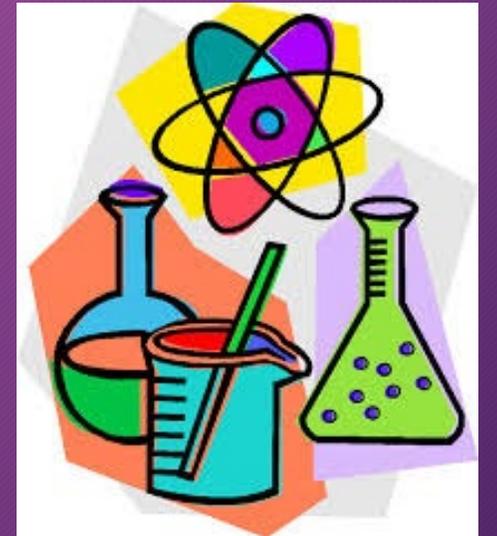
Extended Standards for Math



- **Number Operations and Concepts**
 - Students sequence and use number operations and related concepts to solve problems
- **Geometry**
 - Students recognize, sort, compare, and contrast geometric shapes and objects and relationships
- **Measurement**
 - Students use tools to apply numbers and concepts to length, capacity, time, and weight
- **Algebraic Concepts and Relationships**
 - Students recognize and extend patterns and use numbers and symbols to solve problems
- **Data Analysis and Probability**
 - Students collect and organize data and make predictions based on given situations

Extended Standards for Science

- Concepts and Processes
 - Students learn about scientific content through inquiry
- Science as Inquiry
 - Students use inquiry to better understand their world
- History and Nature of Science in Personal and Social Decisions
 - Students use scientific knowledge to make personal decisions



Complexity Levels

- 1: Attends to, responds to or engages, indicates, recognizes
- 2: Interacts with, matches, identifies, chooses or selects
- 3: Labels or names, recognizes and labels
- 4: Determines

Assessment and Evaluation Tools

- SETT (Student, Environments, Tasks, & Tools) Framework
- Education Tech Points
- WATI (Wisconsin Assistive Technology Initiative) Resources

SETT Framework

SETT Framework

- Student, Environments, Tasks, and Tools
- Developed by Joy Zabala in 1995
- Appropriate for all phases of service delivery for AT and AEM
- Focuses conversations and facilitate consensus-building for student, teachers, parents, therapists, and other staff members
- Decreases rates of device abandonment

Student Questions

- How does disability impact the student's function?
- How is student currently managing her/his challenges?
- How does the student communicate in her/his environments?
- How does the student move in their environments?
- What are the student's strengths, interests, and preferences?



Environments Questions

- Includes physical, social, virtual, attitudinal, etc. environments
 - Device abandonment can be influenced by adult supports
- Examine multiple environments
 - School (classroom, lunchroom, resource room), home, etc.
- How is the classroom arranged?
 - How many students? Group seating? Individual desks?
- What materials and equipment are available in the classroom?
- What barriers and supports are present in the environments?



Tasks Questions



- What tasks are important for the student, both personally and academically?
- “What *specific* tasks does a student need to be able to do to be personally and academically involved?”
- “What *specific* tasks occur in the student’s environments that enable progress towards IEP goals?”
- What tasks are required for the student to complete a desired or required activity?

Tools

- Discuss student, environments, and tasks before considering tools
- What qualities and features would the ideal AT for this student have?
 - Encourages participation by team members who might be unfamiliar with AEM or AT
- How will the AT/AEM aid the student in completing tasks in their standard environments?



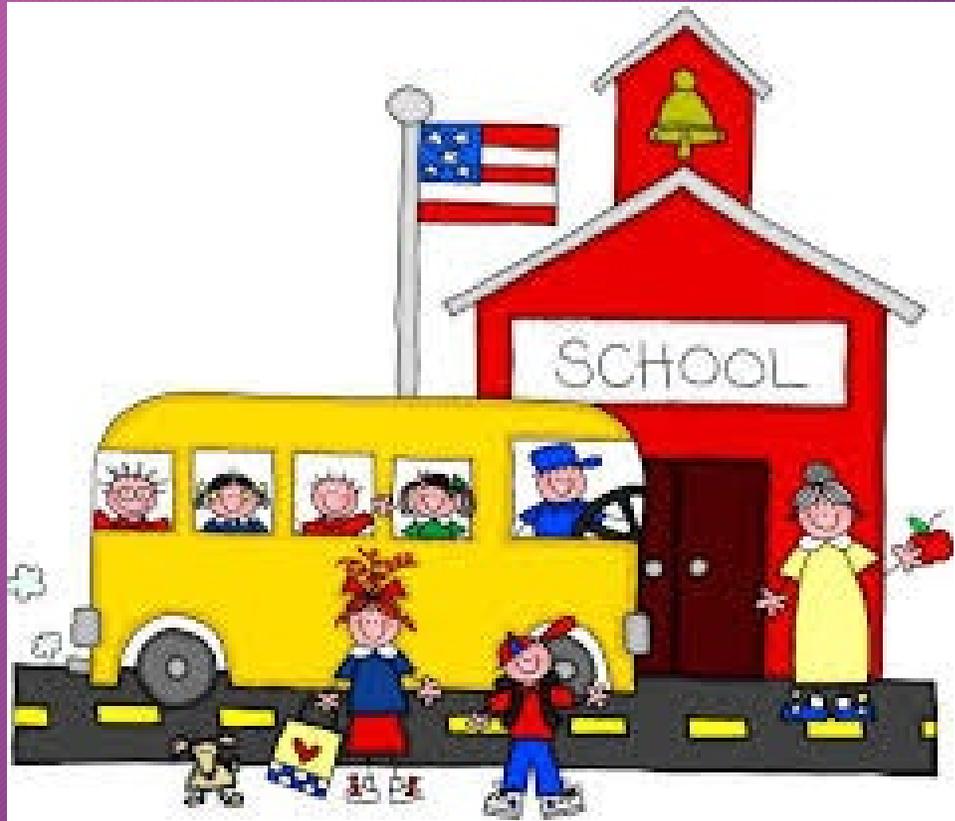
Education Tech Points

Education Tech Points

- AT framework developed by Gayl Bowser and Penny Reed (1995, 2012)
 - Adapted from TECH Points model (Langton & Hughes, 1992)
- “This framework can provide a way to effectively organize and monitor AT utilization while enabling programs to tailor activities to match the needs of each student” (p. ii).
- Composed of 7 Education Tech Points
 - Each Tech Point “represents a place in the process where the team should thoughtfully address AT” (p. 1).

7 Education Tech Points

1. Consideration and referral
2. Evaluation
3. Trial period
4. Plan development
5. Implementation
6. Periodic review
7. Transition



1. Consideration and Referral

- Does the student's disability make it hard for him or her to learn information and demonstrate that knowledge?
- Would AT improve the student's access to the curriculum?
- If student is already eligible for special education:
 - Consider need for AT during every IEP meeting
- If student is new to special education:
 - Consider whether AT should be included in initial IEP

2. Evaluation

- With which tasks is the student struggling?
- What types of AT might help the student complete these tasks?
- Do we need to seek advice from a specialist?
- Would it be beneficial to trial several devices?
- Ensure that AT assessments are completed within timelines prescribed by law

3. Trial Period

- Identify the tasks for which AT will be used
- Identify the AT to be trialed
- Develop a plan for collecting data to measure change in student's performance
 - Formulate hypothesis regarding student's performance
- Determine an appropriate timeframe for the trial
- Gather feedback and data during and upon conclusion of the trial
- Make recommendations to the IEP team based on the results of the trial
- “Staff members need training regarding data collection and analysis”

4. Plan Development

- What did we learn from the trial period?
- What are the student's IEP goals?
- What AT devices/services are anticipated to help student achieve these goals?
- “What are the criteria for successful AT use by the student?”
- Document AT devices/services in the IEP
 - IEP might identify specific device(s) or the characteristics of a device
 - Document which staff member(s) will provide the services
- Training is needed for all staff members

5. Implementation

- What training does the student need in order to use her/his AT?
- Ensure support is available when and where student is using the AT
- Which staff members are responsible for implementing each part of the AT plan?
- What happens when the device malfunctions?
- Disseminate information widely
- Develop “systems for monitoring and progress reporting”

6. Periodic Review

- Is the AT being used as described in the IEP?
- Are the AT services being provided as described in the IEP?
- “Are the AT devices/services functioning as expected?”
- What do the data indicate about the student’s performance? Improvement? Regression?
- What needs to be changed?
- “Professional development should include data analysis strategies that enable educators to adjust the student’s program of AT use.”
- “Staff training is needed that describes the district’s procedures for making changes to the IEP if AT does not work as expected.”
- May need to trial new devices

7. Transition

- Ensure AT is incorporated in the transition plan
- What is the next transition the student will encounter (new school, graduation, aging out)?
- What AT devices/services will the student need in new setting?
- How will these devices/services be provided in the new setting?
- To the extent possible, train student to use AT independently
- Promote self-determination in use of AT
- Foster student's self-advocacy skills
- Staff need training to support student's transition

WATI Resources

Wisconsin Assistive Technology Initiative has numerous guides, fillable forms, and resources on their website.



PROBLEM IDENTIFICATION

Student's Abilities/Difficulties	Environmental Considerations	Tasks
<ul style="list-style-type: none"> • Writing/use of hands • Communication • Reading/academics • Mobility • Vision • Hearing • Behavior • Attention • Organization • Sensory strengths/needs • Other 	<ul style="list-style-type: none"> • Classroom • Playground • Lunch room • Home, etc. <p>In each:</p> <ul style="list-style-type: none"> • Technology equipment available • Room arrangement, lighting • Sound • Other sensory aspects • Activities that take place 	<p>Examples:</p> <ul style="list-style-type: none"> • Produce legible written material • Produce understandable speech • Read text • Complete math problems • Participate in recreation/leisure • Move independently in the school environment
		Narrowing the Focus
		Specific task identified for solution generation
Solution Generation Tools & Strategies	Solution Selection Tools & Strategies	Implementation Plan
Brainstorming Only No Decision Review AT Checklist	Discuss & Select Idea from Solution Generation	AT Trials/Services Needed: Date Length Person Responsible
		Follow-Up Plan
		Who & When Set specific date



WATI Decision Making Guide

WATI Classroom Observation Guide

<p>Task: Ex: Writing a report, working on SMART Board, aligning mat problems, researching topic in media center. Directions: Given Visually or verbally Time: to complete task</p>	<p>General students' response: How does the rest of the class respond to the directions? How do they complete their work?</p>	<p>Target Student Response: Do you notice any difference in how the target student handles the directions? How do they begin, maintain, and end the task? Was the time for the activity sufficient?</p>	<p>Barrier to task completion: What do you notice about the environment that might affect the target student's work? Ex: How the directions were delivered, time to complete the task, different learning style.</p>	<p>Potential Adaptations: What pops into your head as a solution that you might bring to the brain storm session during the ASNAT meeting?</p>	<p>Questions: What information do you need? What questions do you have for the teacher/student/parent?</p>
<p>Task: <input type="text"/></p> <p>Directions: <input type="text"/></p> <p>Time: <input type="text"/></p>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

WATI Tool Identification Guide

WATI Tool Identification Guide

STUDENT: _____ Task: _____



1. Across the top row describe characteristics or functions of a tool needed by the student (e.g., large print, portable, run on iPad) - 1 descriptor per column.
2. Down the left column identify and list the name of possible tools - 1 tool per row.
3. For each tool, note where it matches each of the characteristics in the columns with comments, descriptions, and functions to help guide your discussion.

Descriptors 					
Tools 					

Additional Considerations

Quality Indicators for Assistive Technology (QIAT)

- “AT devices and services are considered for all students with disabilities regardless of type or severity of disability.”
- “During development of the IEP, every IEP team consistently uses a collaborative decision-making process that supports systematic consideration of each student’s possible need for AT devices and services.”
- “IEP team members have the collective knowledge and skills needed to make informed AT decisions and seek assistance when needed.”

Quality Indicators for Assistive Technology (QIAT) (continued)

- “Decisions regarding the need for AT devices and services are based on the student’s IEP goals and objectives, access to curricular and extracurricular activities, and progress in the general education curriculum.”
- “The IEP team gathers and analyzes data about the student, customary environments, educational goals, and tasks when considering a student’s need for AT devices and services.”
- “When AT is needed, the IEP team explores a range of AT devices, services, and other supports that address identified needs.”
- “The AT consideration process and results are documented in the IEP and include a rationale for the decision and supporting evidence.”

Functional Evaluation of Assistive Technology (FEAT)

- How reliable is the technology?
- Does the technology do what it is supposed to do?
- Can the student use the technology for multiple tasks?
- Can the technology be customized to the student?
- How compatible is the device with other technologies used in the classroom, home, and other environments?
- Are the outputs (auditory, visual) appropriate?
- Are the input methods feasible?
- How socially appropriate is the device? How stigmatizing is the device?
- How “intuitive, straightforward, and logical” is the device?
- How easy is it to install the technology?
- How easy is it to learn to use the technology?
- What is the quality of customer support?

Universal Design for Learning Principles

- Offer multiple means of:
 - Representation
 - Action and Expression
 - Engagement



- Alternate format materials
 - Large print
 - Braille
 - Audio
 - Digital



Core Vocabulary/Core Words

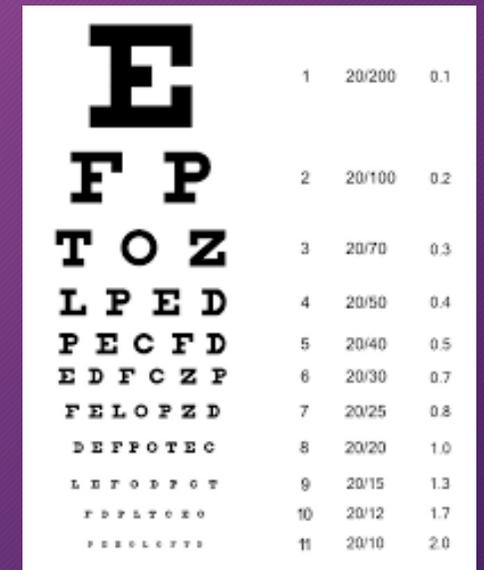
- 50-400 words that make up the majority of communication
- Building blocks for communication
- Backbone of Augmentative and Alternative Communication (AAC) systems
- Students can create their own phrases from this set of words
- Model one step ahead of the student's current skill level

Oakland Schools 32 Core Revised

I	want	get	make	not	more	that	who
mine	go	look	turn	help	all	here	what
you	like	open	do	stop	some	in	where
it	can	play	put	finished	on	uh oh	hey

Final Thoughts and Considerations

- These assessment and evaluation frameworks can be used individually or together.
- Remember that there may be underlying problem areas such as vision or hearing that impact a student's learning. These may not be immediately apparent.
- When considering AEM, think beyond written materials.
- Create accessible activities.
- Consider Universal Design for Learning principles.



Resources

- Leslie Bechtel Van Orman,
Vision Outreach Services
(307) 857-9267
leslie.vanorman@wyo.gov
- Project CORE
<http://www.project-core.com/about-project-core/>
- Wyoming Assistive Technology Resources (WATR)
(307)-766-6187
watr@uwyo.edu
- AEM
(307)-766-5770
aem@uwyo.edu
- AT4ALL Device Database
<https://wy.at4all.com>

Resources (Continued)

- Wyoming Department of Education Extended Standards
(edu.wyoming.gov/educators/standards/extended-benchmarks)
- SETT (joyzabala.com)
- Education Tech Points (educationtechpoints.org)
- WATI (wati.org)
- QIAT (qiat.org)
- FEAT (nprinc.com)