Accessibility in Project-Based Learning

WYOMING ACCESSIBLE EDUCATIONAL MATERIALS

UW | College of Health Sciences
Wyoming Institute for Disabilities

Presenter information

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Learning Objectives

↗ List the four primary categories of alternate format materials

↗ Define a "print disability"

↗ Name at least two things that might indicate a student could benefit from AEM

↗ Identify at least three resources available on the Wyoming AEM Clearinghouse website
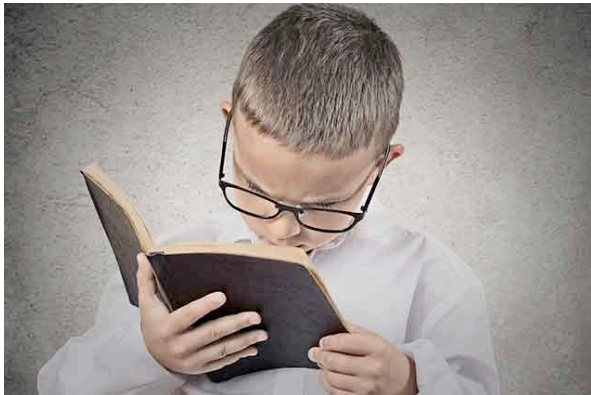
What are AEM?

- ↗ Accessible Educational Materials
    - ↗ Print and technology based educational materials, including core instructional materials (textbooks, workbooks, etc) produced in an accessible format to students with print disabilities
- ↗ "Accessible" means – **equity** of access, all students can participate in curriculum, independently

- ↗ Other aids and assistive technology to help with learning, understanding, comprehension

Who will benefit from AEM?

↗ Print disability

    ↗ Visual impairment or blindness

    ↗ Physical impairment
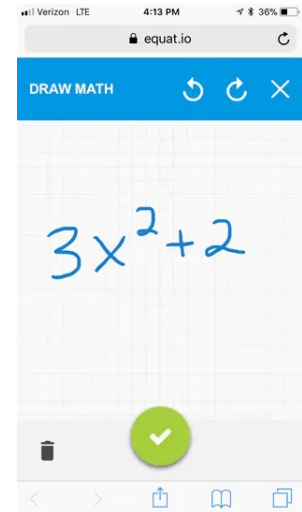
    ↗ Learning or reading disability

What to look for:

↗ The student dislikes reading

↗ The student has below average reading level, shows difficulty with reading aloud, fluency, comprehension

↗ The student requires extra time to read or complete assignments

↗ The student cannot hold a book or turn pages independently

↗ The student has poor posture due to difficulty accessing standard print

↗ Information from a comprehensive evaluation indicating materials in a specialized format are needed

What are alternate format materials?

- Braille
- Large print
- Audio
- Digital
- Tactile graphics

How can accessible formats be found/produced?

↗ Online/physical repositories of accessible materials

↗ Accessible Media Producers (AMP)

↗ Publisher content

↗ Braille embosser/braille translation software

↗ Voice recording

↗ Design inclusive materials

How can alternate formats be accessed?

- ↗ Computer/tablet/phone

- ↗ Web platforms

- ↗ Apps

- ↗ Digital media player

- ↗ CD, USB, cartridge

- ↗ AT- tools, devices, apps, software
    - ↗ Text-to-speech, screen readers, refreshable braille

Why provide AEM?

↗ Federal statutes, local statutes, and civil rights legislation require State Education Agencies and Local Education Agencies to ensure that students with disabilities can access, participate, and achieve in the general educational curriculum.

↗ AEM may be required in order to provide a Free and Appropriate Public Education (FAPE)

↗ IDEA requires IEP teams to consider 5 "special factors"

   ↗ Behavior

   ↗ Limited English proficiency

   ↗ Blindness or visual impairment

   ↗ Communication needs or deafness

   ↗ **Assistive technology**

↗ AEM supports ensure students can actively participate in their education

** Legal requirement to provide accessible materials falls on state and local education agencies, not publishers**

IDEA cannot place requirements on publishers. Educators must drive the demand for educational materials to be produced in accessible formats.

When purchasing textbooks, the school should request that the publisher sends the electronic files of any purchased instructional materials to either the National Instructional Materials Access Center (NIMAC) or to any accessible media producer (AMP) by including an accessibility statement in the purchase contract.
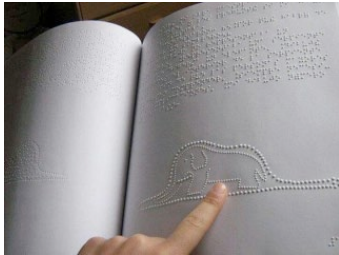
XML

Does AEM violate copyright law?

↗ The Chafee Amendment (17 U.S.C. 121) provides that " it is **not an infringement** of copyright for an authorized entity to reproduce or to distribute in the United States copies or phonorecords of a previously published literary work... if such copies or phonorecords are reproduced or **distributed in accessible formats exclusively for use by eligible persons**."

Wyoming Accessible Educational Materials Clearinghouse

- ↗ AEM device lending library
- ↗ NIMAC authorized user
- ↗ Training and tutorials
- ↗ Resources and referrals

About Wyoming AEM Clearinghouse

- Project contracted through the Wyoming Department of Education
  - Housed with the Wyoming Institute for Disabilities (WIND)
  - Work closely with Wyoming Assistive Technology Resources (WATR)

- Designated as state authorized user for NIMAC
  - Verify student eligibility
  - Access and request materials
  - Submit materials to AMPs

- Carry out other activities as directed
  - Maintain website
  - Attend conferences, present, host information booth
  - Conduct trainings
  - Respond to state needs

WHAT IS AEM?

FORMS & CONTRACTS

AEM DEVICES

APP & DEVICE TUTORIALS

TRAININGS & EVENTS

NIMAC AND RELATED RESOURCES
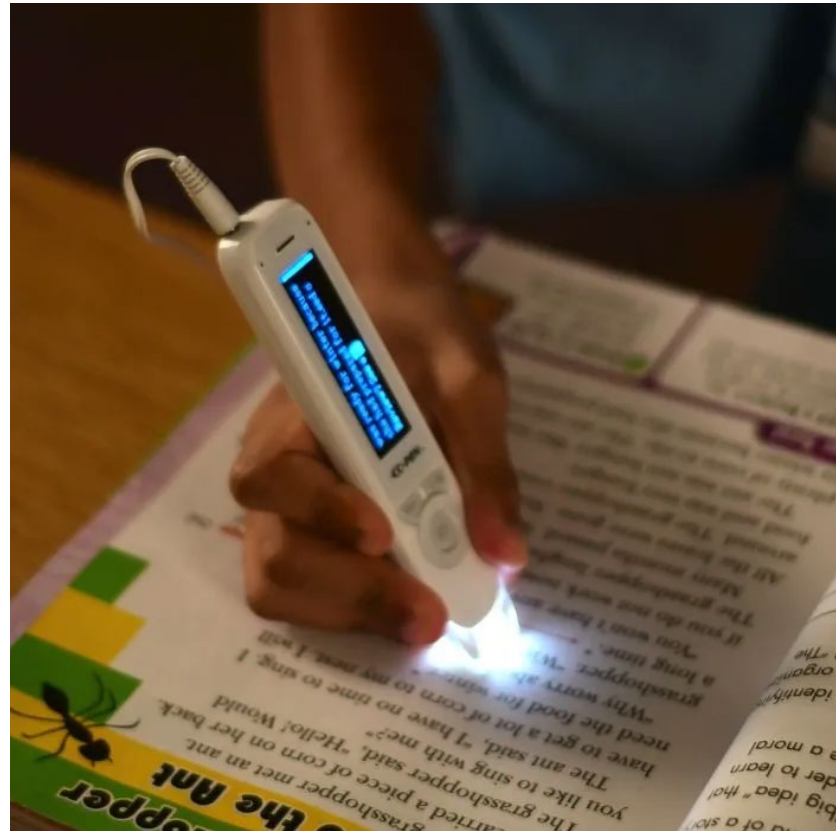
AT TEAMS TRAINING

SUCCESS STORIES

FREQUENTLY ASKED QUESTIONS
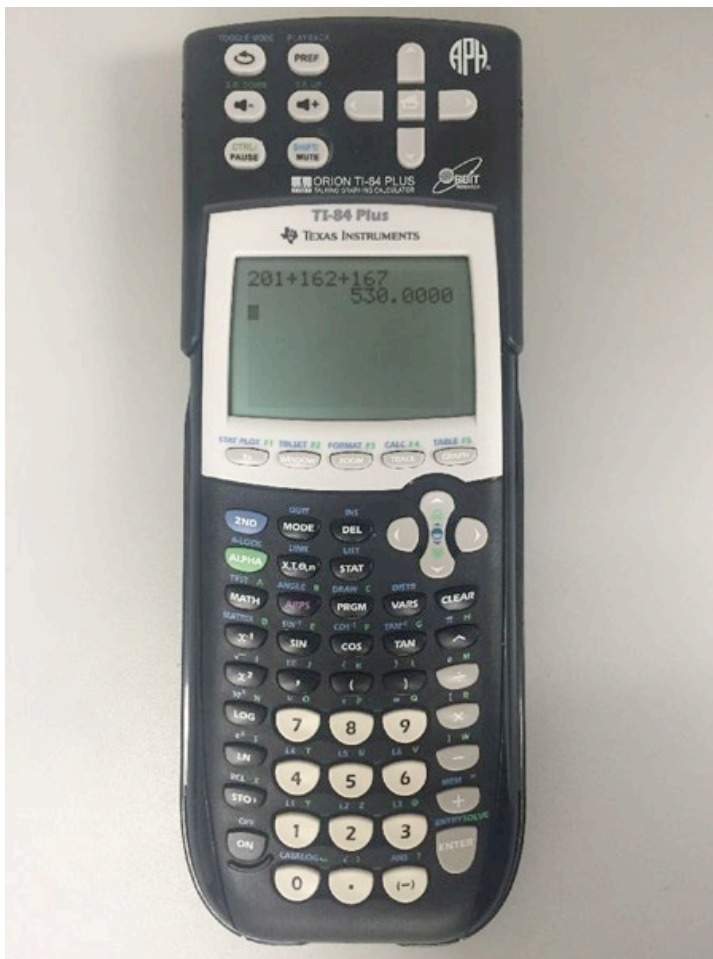
Examples of AEM Devices

Hear words & lines of text read aloud as the nib of the pen scans the page, just like a highlighter. With a built in English dictionary as well as Spanish, French, German, and Italian, students can check the definition or translation of a word. The C-Pen Reader Pen 2 can scan, store & transfer text to computer. The pen also functions as a voice recorder, as well as includes an "exam mode" in which dictionary access and memory functions can be disabled.

C-Pen Reader 2

Explore graphs using either spoken announcements or audio and haptic (vibrating) feedback. Moving along the graph from left to right shifts the tone from the left to the right stereo channel. Tones raise and lower to follow graph coordinates. As the graph moves below the x-axis where the y-coordinates are negative, white noise is added to the tone. Haptic feedback is provided for negative y-coordinates, axes crossings, and tick marks.

Orion TI-84 Plus Talking Graphing Calculator ↗

Includes:

- 100" print/braille meter tape
- Modified 100 ml and 1000 ml plastic beaker
- (2) graduated cylinders 50 ml and (2) 100 ml w/ large print and braille scale floats
- Histogram board
- Instructions in braille

- Balance
- Funnel stand
- Mass set w/20-, 10-, 5- g pieces
- Mass set with one hundred 1-g pieces
- Talking digital thermometer
- (2) tray liners
- 50 ml syringe with stop
- (4) 9 oz. plastic cups

Adapted Science Materials Kit

PIAF is a machine that makes raised line drawings on special paper, called capsule or swell paper. Users can draw, print or photocopy pictures onto the swell paper and pass it through the Piaf. The heat of the Piaf causes the lines to swell and then the drawing can be read with the fingers. It is ideal for people who are blind and vision impaired. Piaf is being used in a variety of educational, employment and personal settings.

Picture in a Flash (PIAF)

Digital video magnifiers provide enhanced magnification with clear images and typically offer several features, including magnification level adjustment, color contrast options, text-to-speech, image freezing, and more.

Digital Video Magnifier

Use this handheld device to scan a page or document and hear it read aloud. The OrCam Read uses a laser to help focus the scan area. This device also uses AI technology to allow users to interact with gestures, such as pointing to where they would like to scan or start reading.

OrCam Read

To borrow devices:

➚ Call, email, video conference, or visit in-person to see what devices we have available

➚ Check our website https://wy.at4all.com/ to browse all devices

    ➚ Search for a specific device or browse by category

    ➚ Contact us if you don't find what you are looking for

➚ Complete a loan agreement (contact us for the form)

➚ We will ship you the device(s) to trial for 6 weeks

NIMAC and Related Resources

National Instructional Materials Accessibility Standard

The NIMAS is a technical standard used by publishers to produce source files (in XML) that may be used to develop multiple specialized formats for students with print disabilities.   For example, once a NIMAS file set has been produced, the XML and image source files may be used to create Braille, large print, HTML, DAISY talking books using human voice or text-to-speech, audio files derived from text-to-speech transformations, and more.

National Instructional Materials Access Center

The NIMAC is the national repository for NIMAS source files provided by publishers. Only students who are dually qualified under IDEA and copyright law are eligible to receive specialized formats created from NIMAS-conformant files from the NIMAC.
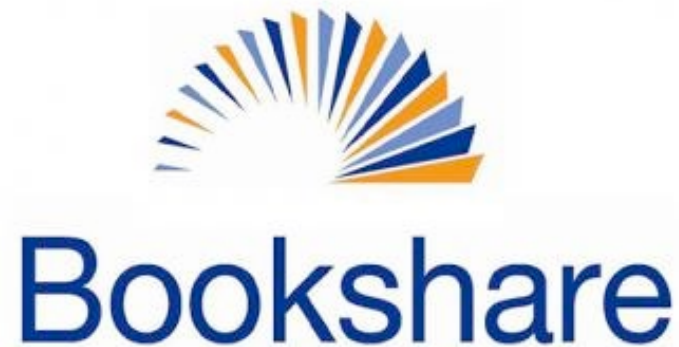

NIMAS and NIMAC

Learning Ally: The Learning Ally solution provides struggling readers with equitable access to the books they want to read and the grade-level content they need to read. With the largest library of human-read audiobooks and a suite of educator tools and resources, students become engaged, independent learners.

Learning Ally

Bookshare is an E-book library that makes reading easier. People with reading barriers can choose from a huge collection of digital voices and titles, and find virtually any book needed for school, career, or the joy of reading. Listen to books, follow along with karaoke-style highlighting, read in braille or large font, and fully customize the reading experience.

Bookshare ↗

To request alternate format materials:

➚ Visit http://www.uwyo.edu/wind/aem/forms.html

➚ Fill out the "Wyoming Student Eligibility Form"

 ➚ This form verifies student has a qualified disability

 ➚ When completed, return to: Leslie Bechtel Van Orman

  ➚ Wyoming Department of Education, 320 West Main, Riverton, WY 82501

  ➚ FAX: (307) 857-9257

➚ Submit a "Request Form for Accessible Media"

 ➚ Complete and submit to:

 ➚ Email: aem@uwyo.edu

 ➚ Fax: 307-766-2763

 ➚ Mail: Accessible Educational Materials, 1000 E. University Ave., Dept. 4298, Laramie, WY 82071

AT Teams Training

AT Teams Project

↗ Designed to help Wyoming school districts develop Assistive Technology teams

↗ Districts created operating guidelines or AT procedures documents

↗ 11 districts participated between 2021 and 2024

↗ Materials and resources available

Additional Resources/Contacts

➚ Wyoming AEM Clearinghouse:
http://www.uwyo.edu/wind/aem/

➚ Wyoming Assistive Technology Resources (WATR)
http://www.uwyo.edu/wind/watr/training/index.html
watr@uwyo.edu   307.766.6187

➚ AT4ALL Database (WATR and AEM Device Loan Library):
https://wy.at4all.com/

➚ National Center on Accessible Educational Materials:
http://aem.cast.org/

References

↗ Module 1: Introduction to AEM. (2019, March 22). Retrieved from http://aem.cast.org/about/module-1-new-educator-training.html#.XVWYZUJmX1

↗ Special Factors in IEPDevelopment. (2017, July 31).Retrieved from https://www.parentcenterhub.org/special-factors/#AT

Contact information

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Reminders

- Please complete our short survey!

- Sign up for monthly DispATch email newsletter
  - https://www.uwyo.edu/wind/watr/publications.html

- Certificate of attendance upon request

- Join our next training on November 12 at 3:30pm
  - Universal Design for Learning and the Importance of Access for All Students

Questions?