

# Universal Design for Learning: Access

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# “Myths”

Myth = a widely held but false belief or idea

“One of the foremost functions of myth is to establish models for behavior”

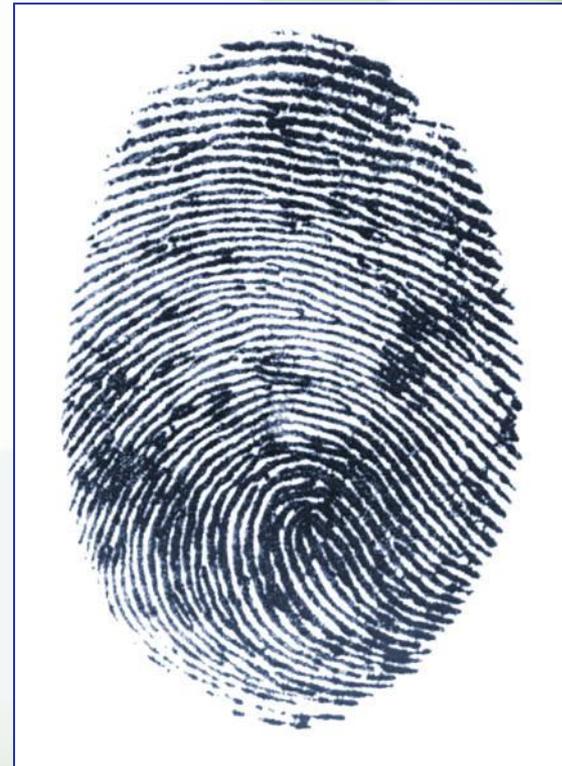
– Mircea Eliade

MYTHS



# *“Myth of the Average Learner”*

- The way we learn is as unique as our fingerprints
- Variability and differences are the norm from student to student, in fact from person to person — even among those who seem to share similar characteristics, such as culture, age, race, or level of success.



# *“Myth of the Average Learner”*

- “We have a society based on a myth that has put us in this self-imposed death spiral, and that is this myth of the average,” “If you take a kid like me—I was a little more impulsive, a little overactive—how in the world that should be a predictor of failure is beyond me....When we create rigid environments that teach to the average, everyone loses.”
- “Basing education on the 'average student' works against our nation's greatest assets—focus on the individual, our diversity and capacity for innovation. ”

-Todd Rose



# *“Myth of the Average User”*

In a study put together by Google based on data from the World Bank (WDI, 2008) and CDC.gov (NHI Survey, 2008), it was found that there are more hard of hearing internet users in the United States than the population Spain and more users who are blind and low-vision than the population of Canada.



# Google Gets UDL



# Universal Design for Learning

*Is  
what?*

A scientifically valid framework  
that

*Does  
what?*

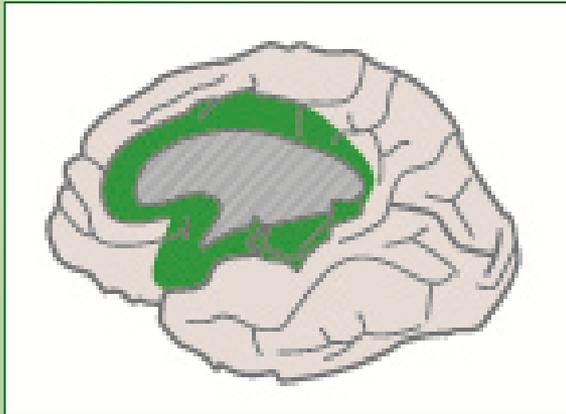
Provides multiple means of access,  
assessment, and engagement and removes  
barriers in instruction

*For  
what?*

to  
achieve academic and  
behavioral success  
for all

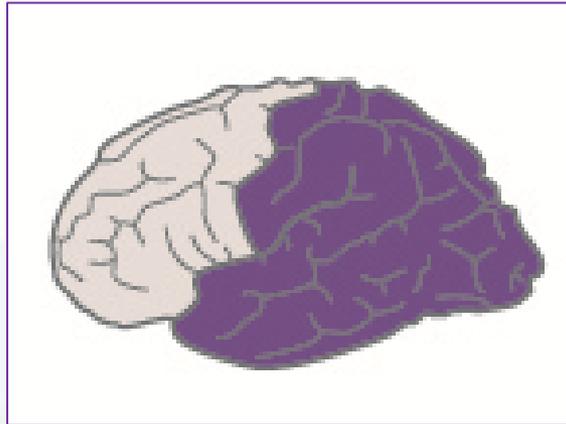
# Three Brain Networks

**Affective**



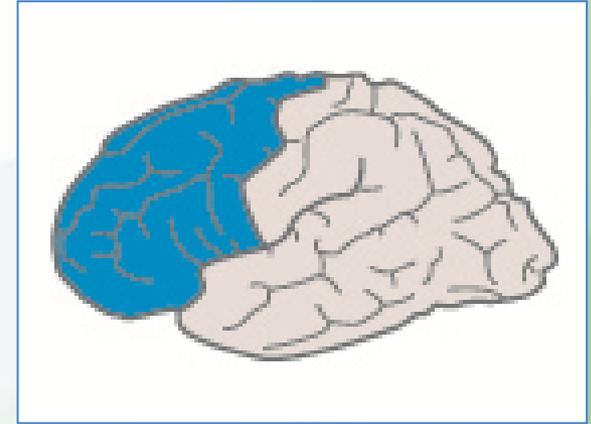
“why”

**Recognition**



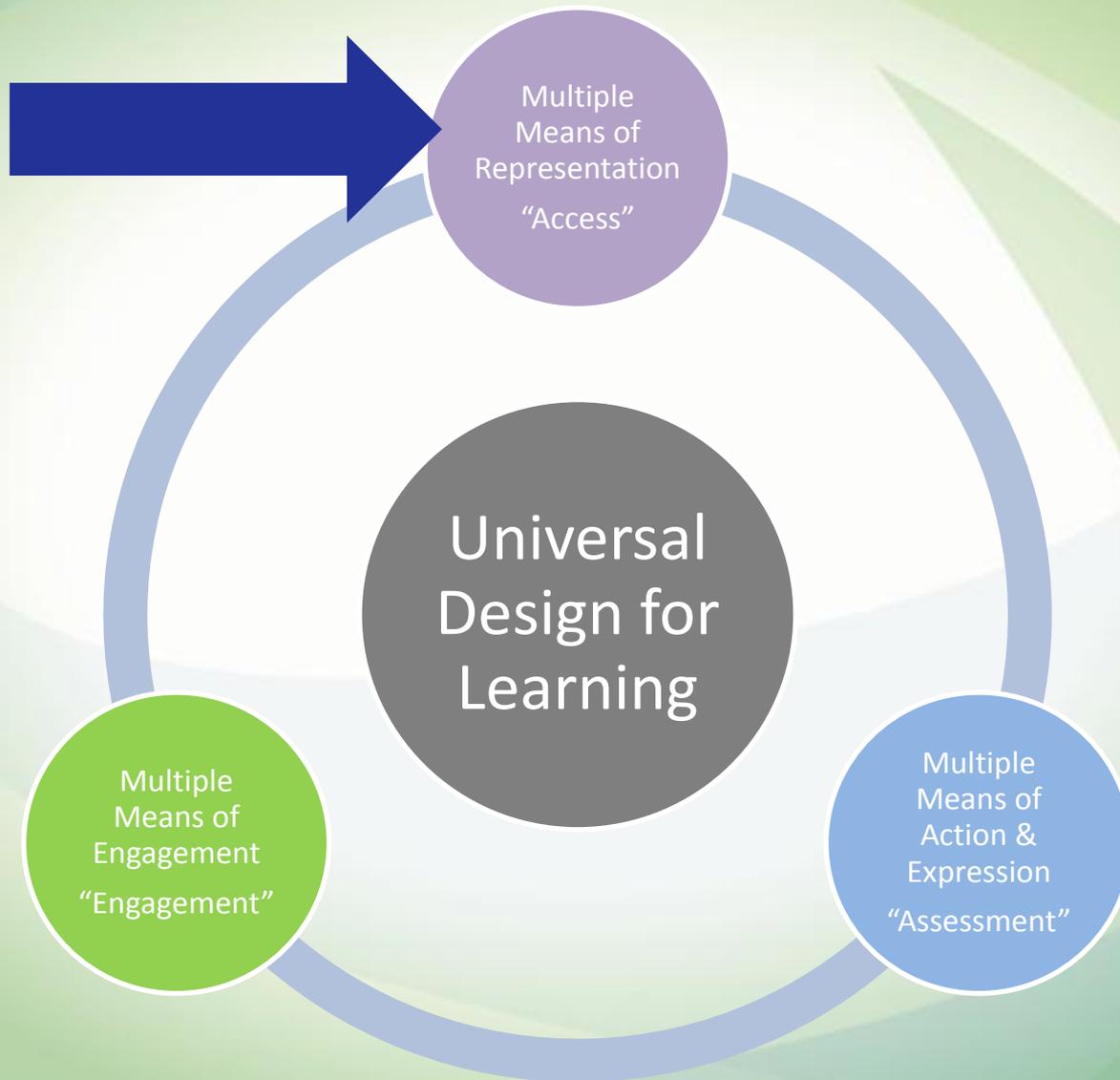
“what”

**Strategic**



“how”

# Three Principles of Universal Design for Learning



# *Multiple Means of Representation (Access)*

## **Did You Know?**

- Students who were exposed to music-based lessons scored a full 100 percent higher on fractions tests than those who learned in the conventional manner. Second-grade and third-grade students were taught fractions in an untraditional manner by teaching them basic music rhythm notation. The group was taught about the relationships between eighth, quarter, half and whole notes. Their peers received traditional fraction instruction.



*Source: Neurological Research, March 15, 1999*

# Access Principle

## **Provide options for comprehension**

- Activate or supply background knowledge
- Highlight patterns, critical features, big ideas, and relationships
- Guide information processing, visualization, and manipulation
- Maximize transfer and generalization

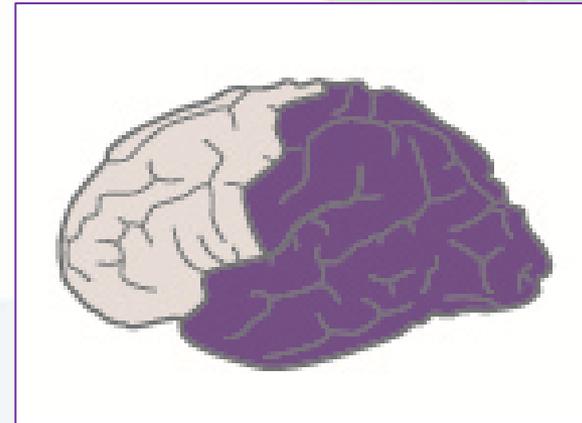
## **Provide options for language, mathematical expressions, and symbols**

- Clarify vocabulary and symbols
- Clarify syntax and structure
- Support decoding of text, mathematical notation, and symbols
- Promote understanding across languages
- Illustrate through multiple media

## **Provide options for perception**

- Offer ways of customizing the display of information
- Offer alternatives for auditory information
- Offer alternatives for visual information

## **Recognition**



“what”

# Access Principle

## Guideline: Provide Options for Comprehension

- Even the best presentation is not effective if students are not able to process and understand the information
- Knowledge is created when students are actively engaged, not passively absorbing and not all students are able to accomplish this independently

# Access Principle: Guidelines and Checkpoints

Provide Multiple Means of Representation (Access)	Resource	Description
Provide options for comprehension		
Activate or supply background knowledge		Provides teachers with a rationale for activating background knowledge, ideas for classroom implementation, ways to measure success, and lesson plans.
Highlight patterns, critical features, big ideas, and relationships	Word Auto Summarize Tool 	Summarizing and adding visual structure is a great way to highlight critical features, big ideas, and relationships.
Guide information processing, visualization, and manipulation		Education Oasis offers a collection of graphic organizers to help students organize and retain knowledge - cause and effect, character and story, compare and contrast, and more
Maximize transfer and generalization		A reflection question generator that is a dice with QR codes on each side. Provides multiple options for responding.

# Maximize transfer and generalization

## The Living Cell



# Access Principle

Guideline: Provide options for language, mathematical expressions, and symbols

- Learners vary in their abilities to use different forms of representation – both linguistic and non-linguistic
- A graph that illustrates the relationship between two variables may be informative to one learner and inaccessible or puzzling to another
- A picture or image that carries meaning for some learners may carry very different meanings for learners from differing cultural or familial backgrounds

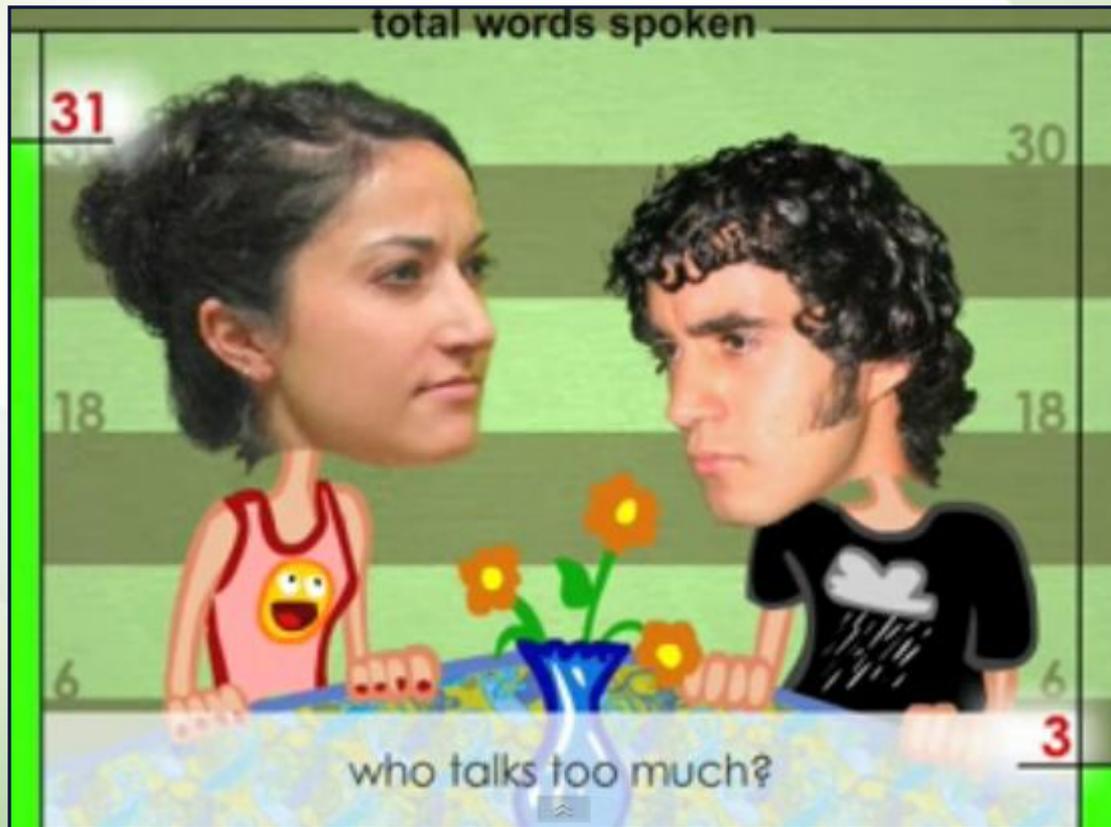
<http://www.udlcenter.org/aboutudl/udlguidelines/principle1>

# Access Principle: Guidelines and Checkpoints

Provide Multiple Means of Representation (Access)	Resource	Description
Provide options for mathematical expressions, and symbols		
Clarify vocabulary and symbols	<a href="#">Shahi</a> 	Visual dictionary that combines a definition with images from flickr, google, and yahoo
Clarify syntax and structure	<a href="#">Simple English Wikipedia</a> 	Entries are designed to be accessible to readers who are acquiring the English language, have limited vocabularies or who are interested in only the major features of the entry.
Support decoding of text, mathematical notation, and symbols		This free online glossary defines mathematical terms and concepts through text, images, with some animation
Promote understanding across languages	<a href="#">Word 2 Word</a> 	Use online dictionaries in students' native languages to help build vocabulary and background knowledge.
Illustrate through multiple media		WatchKnow is a free, online video library with links to more than 11,000 videos in 2,000 categories including history, math, science and other subjects.

# Illustrate through multiple media

## Bad Date Video



[http://www.teachertube.com/viewVideo.php?video\\_id=162649](http://www.teachertube.com/viewVideo.php?video_id=162649)

# Access Principle

## Guideline: Provide Options for Perception

- It is critical to provide options in the way that students perceive information
- Focus is on providing students a way into the content
- Presenting information in only one way will create barriers and unnecessarily exclude some students from the curriculum

# Access Principle: Guidelines and Checkpoints

Provide Multiple Means of Representation (Access)	Resource	Description
Provide options for Perception		
Offer ways of customizing the display of information	High Contrast 	Flexibility of color and contrast is a great example of customizing the display of information so that it is accessible to a broader range of users.
Offer alternatives for auditory information		Amara lets you upload a video and then caption, translate, subtitle or transcribe it for your audience.
Offer alternatives for visual information	<a href="#">Decribed and Captioned Media Program</a> 	Described and Captioned Digital Media Program is a library of over 4,000 open-captioned titles (videos, CD-ROM, and DVD). Several hundred titles are also streamed on the web site.



Many teachers already have great ways to provide access to all learners

# Activity:

## Think – Pair - Share

1. *Think* silently about other examples of Principle 1 that you have used or seen
2. *Pair up* with someone and exchange thoughts
3. *Share* thoughts with another pair when directed

# Digital Text

- Once text is available in a digital format, it is flexible, accessible, and useable for all learners



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# Who benefits from digital text?

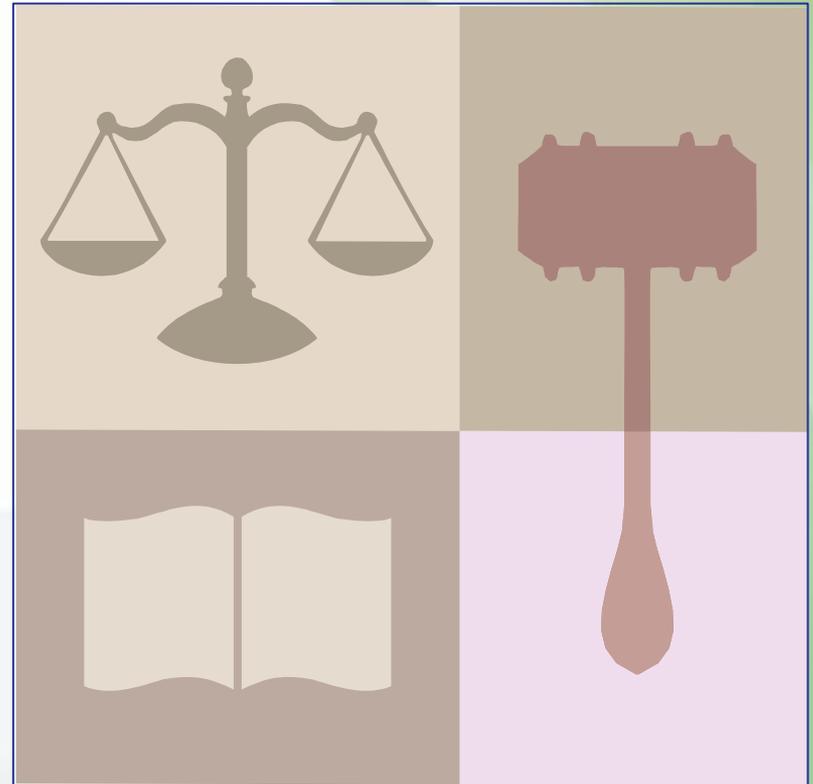
- Students with visual impairments
- Students with physical impairments
- Students with specific learning disabilities
- Students who have tracking difficulties
- Students who get distracted while reading
- Students who need extra supports to understand the text
- Students who are English Language Learners
- Students who code switch between home language and school language

# Why use digital text over human readers?

- No worries about extra hints
- Frees up staff time
- Kids can read at their own pace
- Kids can manipulate text by enlarging it, changing font style or color, increasing space between lines,
- Kids can look up definitions of words, mark up text, search the text for a specific term,

# The Legal Connection

- Provisions within the Individuals with Disabilities Education Improvement Act of 2004 require state and local education agencies to ensure that textbooks and related core instructional materials are provided to students with print disabilities in specialized formats in a timely manner.



# Accessible Instructional Materials (AIM)

Accessible Instructional Materials (AIM) are materials that are designed or enhanced in a way that makes them usable by the **widest possible range of student variability** regardless of format (print, digital, graphical, audio, video)

# Ways to Obtain Accessible Instructional Materials

- NIMAS/NIMAC/WAMP
- Bookshare
- Other sources



# National Instructional Materials Accessibility Standard (NIMAS)

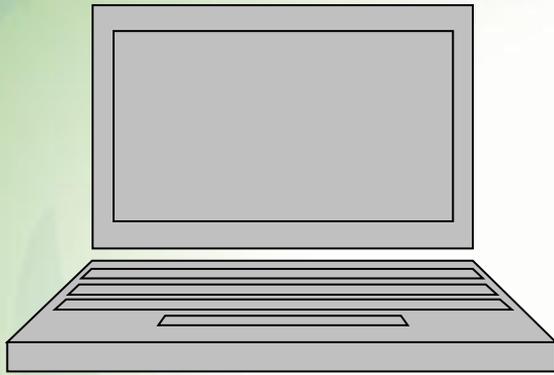
- The goal of NIMAS is to promote the development of high quality and consistent source files to be used to create specialized formats for students with print disabilities.
- NIMAS establishes a standard for publishers to follow that is consistent and valid when producing instructional materials in accessible format.
- Instructional materials supported by NIMAS include textbooks and core materials that are written and published for elementary and secondary school instruction.
- Applies to textbooks published after July 19, 2006



## National Instructional Materials Access Center (NIMAC)

The U. S. Department of Education Office of Special Education Programs (OSEP) established a National Instructional Materials Access Center (NIMAC) which created a national repository of NIMAS files that can be converted into accessible formats for students who are blind or visually impaired, including those with other print disabilities

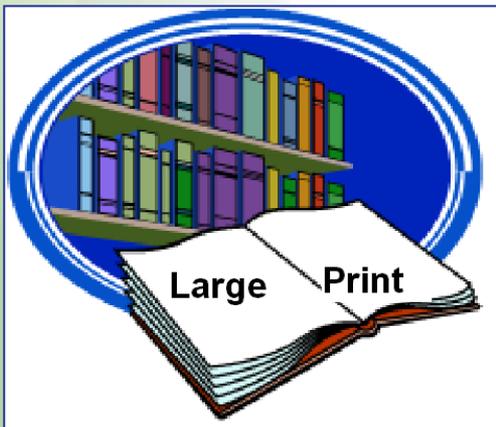
# Specialized Formats Available



**Digital**



**Audio**



**Large Print**



**Braille**



- Purpose is to assist the local districts in obtaining accessible education materials in specialized formats
- Can assist with language in textbook purchasing contracts to ensure the publisher prepares and submits files meeting NIMAS (National Instructional Materials Accessibility Standard) requirements
- Once a student is determined eligible for NIMAS specialized formats by the IEP team, those materials can be requested through WAMP

# How do I get materials that I need for my student who is print disabled?

Go to the Wisconsin Accessible Media Productions (WAMP) website, found at <http://www.wamp.k12.wi.us> and complete these forms:

- Provider Information Sheet
- Student Information Sheet
- Book Request form

# Where will I document the need for specialized print format in the IEP?

Indicate that the student is "print disabled" under:

- present level (I-4) *AND*
- supplemental aid and services (I-9)



# Bookshare

- Bookshare® provides the world's largest online library of accessible reading materials for people with print disabilities.
- Individuals can sign up for membership and access the library on their own.
- Organizations that serve individuals with print disabilities (schools, libraries, community centers, etc.) can sign up and provide access to their students or clients.
- Through an award from the U.S. Department of Education Office of Special Education Programs (OSEP), Bookshare offers free memberships to U.S. schools and qualifying U.S. students.

# Other Sources of Accessible Materials

- Learning Ally [www.learningally.org](http://www.learningally.org)
- Project Gutenberg <http://www.gutenberg.org/>
- Accessible Books Collection  
[www.accessiblebookcollection.org](http://www.accessiblebookcollection.org)
- American Printing House for the Blind  
<http://www.aph.org/>
- National Library Service for the Blind and Physically Handicapped (NLS) <http://www.loc.gov/nls/>

# Other Educational Efforts that Focus on Access

## **Educator Effectiveness - Danielson Model**

### Domain I Component I:b - Demonstrating Knowledge of Students

- Knowledge of students' skills, knowledge, and language proficiency
- Knowledge of students' interests and cultural heritage
- Knowledge of students' special needs

### Domain I Component I:e - Designing Coherent Instruction

- Learning activities
- Instructional materials and resources

# Other Educational Efforts that Focus on Access

**Educator Effectiveness - Stronge Model**

**Standard 2: Instructional Planning**

**Standard 3: Instructional Delivery**

# Other Educational Efforts that Focus on Access

## Common Core State Standards (CCSS)

Students with **diverse needs** must be challenged to excel within the general curriculum and be prepared for success in their post-school lives. The implementation of the CCSS provides a historic opportunity to improve **access** to rigorous academic content standards for students with **diverse needs**.

# Other Educational Efforts that Focus on Access

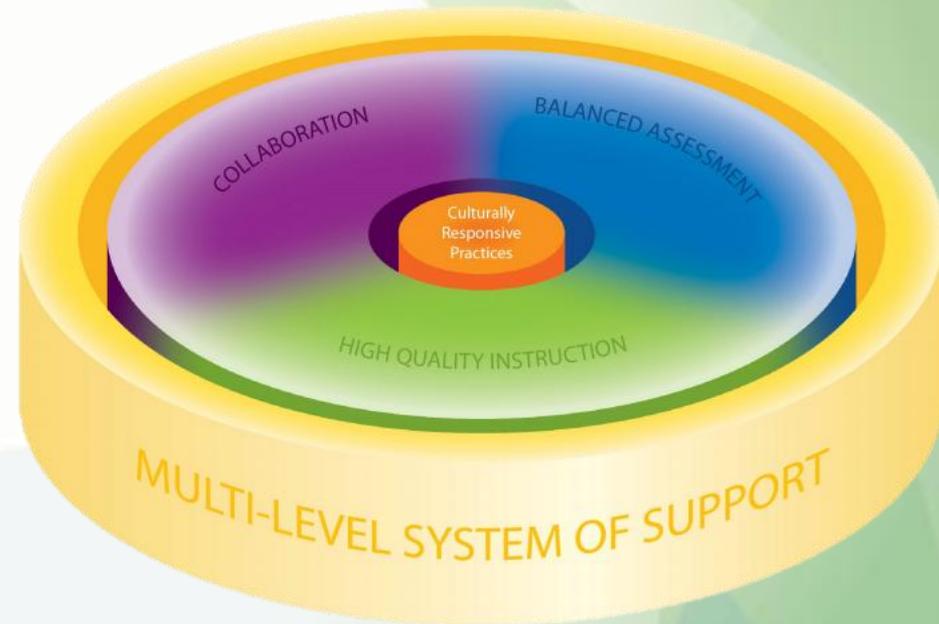
## Personalized Learning

- promotes that **ALL** students must have **access** to tools that support and enhance anywhere, anytime learning

# Other Educational Efforts that Focus on Access

## Multi-Level System of Support

**All** students should receive high-quality, culturally responsive universal academic and behavioral instruction that is aligned to the standards and delivered through multiple means of **access**, assessment and engagement.



# Activity: Table Talk

Have a brief conversation at your table about High Quality Instruction...

- What are your non-negotiables?
- Do you see gaps in your current systems that may be addressed through the Universal Design for Learning principles and guidelines?

# Other Educational Efforts that Focus on Access

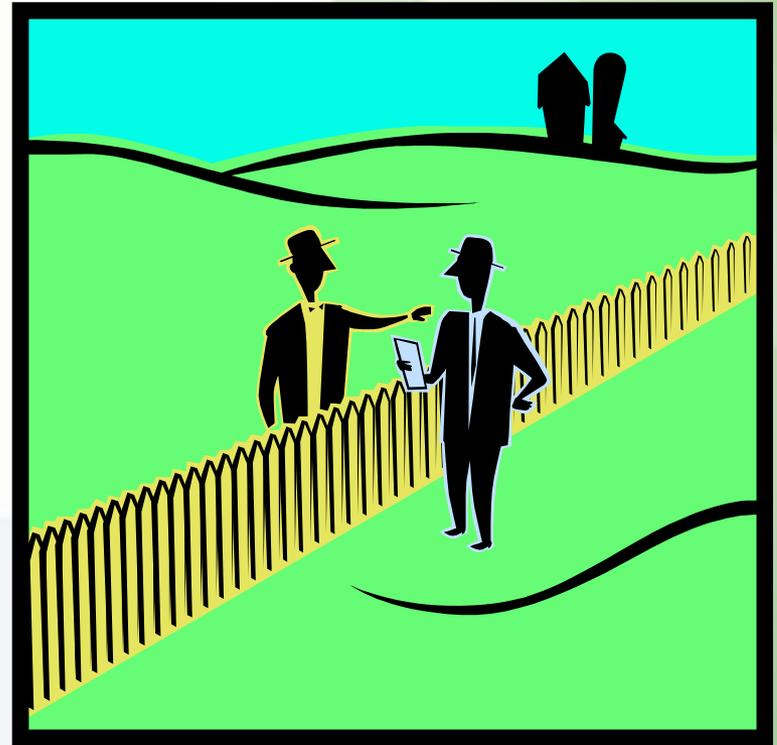
## **Culturally Responsive Multi-Level System of Support**

- Reaching more learners at the core or universal level of instruction (academically and behaviorally)
- Use Universal Design for Learning to design more flexible RtI interventions and instruction
- Simultaneously implement RtI and Universal Design for Learning to improve the general education curriculum
  - Both academics and behavior
  - Greater opportunities to be culturally responsive

# Activity - Neighbor Nudge

“Nudge” (gently!) your neighbor and tell him/her the most important thing you have learned in the so far during this presentation.

What does your neighbor think is the most important thing they have learned?



# What was UDL Today?

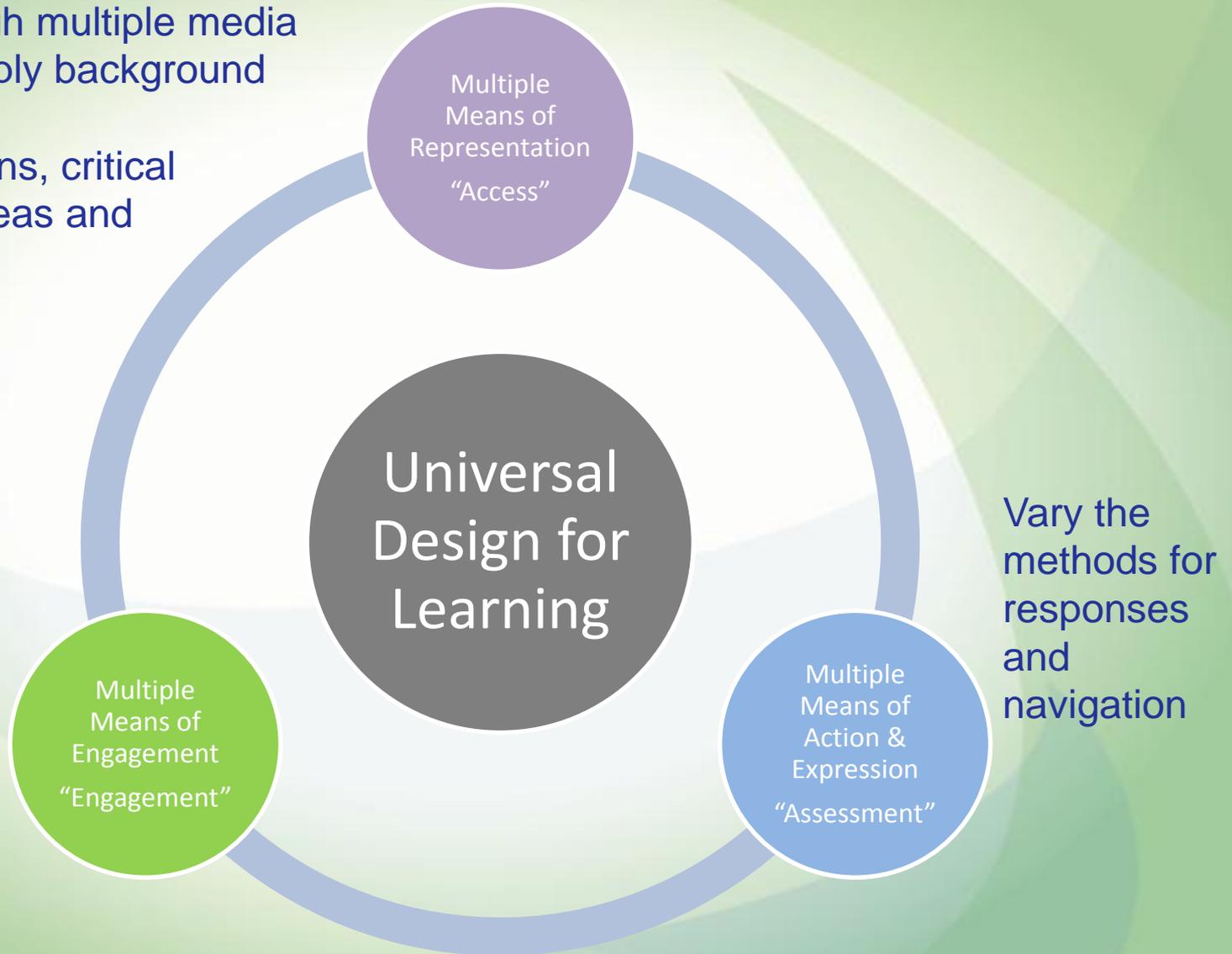
Offer alternatives for auditory information

Illustrate through multiple media

Activate or supply background knowledge

Highlight patterns, critical features, big ideas and relationships

Provide options for recruiting interest



# Resources

- WAMP <http://www.wamp.k12.wi.us/>
- Bookshare [www.bookshare.org](http://www.bookshare.org)
- DPI Bulletin 13.02 Legal Requirements of Accessible Instructional Materials (AIM)  
<http://sped.dpi.wi.gov/files/sped/pdf/bul13-02.pdf>

# Resources

- National Instructional Materials Access Center (NIMAC) <http://www.nimac.us/>
- Accessible Instructional Materials (AIM) <http://aim.cast.org/>