

## The Assessor and Reading Supports

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### Overview

- ▶ AT background, laws & policies
- ▶ Describe and demonstrate a range of AT for reading that is available for school-based AT practitioners
- ▶ Discussion AT recommendations for reading with ARD Committee

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## Legal Basis

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### Assistive Technology and IDEIA 2004

Assistive Technology Device  
 ...any item, piece of equipment or product that is used to **increase, maintain or improve** functional capabilities of individuals with disabilities.

Low-tech	Mid-Tech	High-Tech
<ul style="list-style-type: none"> <li>• alternate pencil / grip</li> <li>• physically adapted books</li> <li>• slant board</li> <li>• highlighters, tape</li> <li>• magnifiers</li> <li>• color coding</li> <li>• picture communication</li> <li>• picture schedule</li> <li>• organizers</li> <li>• whisper phone</li> </ul>	<ul style="list-style-type: none"> <li>• word processor</li> <li>• text to speech</li> <li>• spell checker</li> <li>• calculator</li> <li>• digital recorders</li> <li>• tablets / smartphones</li> <li>• e-books</li> <li>• adapted keyboard</li> <li>• adapted mouse</li> <li>• adapted toys</li> <li>• CCTV</li> </ul>	<ul style="list-style-type: none"> <li>• computer</li> <li>• software</li> <li>• OCR software</li> <li>• magnification software</li> <li>• speech output devices</li> <li>• switch, joystick access</li> <li>• scanning access</li> <li>• voice recognition</li> <li>• environmental control devices</li> </ul>

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## Assistive Technology and IDEIA

Assistive Technology Service:  
Any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device, including:

- ❶ Evaluation
- ❷ Purchase, Lease, Provide Devices
- ❸ Selecting, Customizing, Adapting, Applying AT solutions
- ❹ Coordinating AT with other providers' services
- ❺ Training and Technical Assistance - Individual and Family
- ❻ Training and Technical Assistance - Professionals

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## Persons with Disabilities

### ▶ IDEIA – 14 categories

Autism	Other health impairment
Hearing impairment/Deafness	Orthopedic impairment
Visual impairment	Traumatic Brain Injury
Deaf-blind	Multiple disabilities
Emotional Disturbance	Speech / language Impairment
Specific learning disability	Developmental delay
Intellectual disability	

### ▶ Section 504

- ▶ "...persons with a physical or mental impairment which substantially limits one or more major life activities."
- ▶ "People who have a history of, or who are regarded as having a physical or mental impairment that substantially limits one or more major life activities, are also covered."

### ▶ General Education (TEA)

- ▶ "...a student with a disabling condition who does not receive special education or Section 504 services but meets established eligibility criteria for certain accommodations."

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## Assistive Technology in Instruction & Assessment

### ▶ IDEIA

- ▶ AT consideration is based on data which may include (but is not limited to):

- ▶ Evaluation
- ▶ Review of Present Levels of Performance
- ▶ Parent/teacher/student interview
- ▶ IEP Goals and objectives
  - ❑ What is it you want the student to do?

### ▶ Section 504

- ▶ "supplementary aids and services"
- ▶ [www.region10.org/dyslexia/techplan/](http://www.region10.org/dyslexia/techplan/)

### ▶ General Education

- ▶ ADA defines "auxiliary aids and services"
- ▶ "Allowable Test Administration Procedures and Materials"

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## Accessibility Features

1. Signing test administration directions
2. Translating directions into the native language of an English language learner
3. Allowing a student to read test aloud to self
4. Reading aloud or signing personal narrative, expository, literary, or persuasive writing prompt
5. Providing reading assistance on the grade 3 mathematics test

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### Accessibility Features

6. Making assistive tools available
  - scratch paper
  - highlighters, colored
  - magnifying devices
  - color overlays
  - blank place marker
  - pencils, or crayons
7. Giving permission for students to use tools to minimize distractions (e.g., stress ball)
8. Allowing individual and small group administrations
9. Gently reminding students to stay on task

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### Designated Supports

- ▶ Amplification Devices
- ▶ Basic Transcribing
- ▶ Braille
- ▶ Calculation Aids
- ▶ Content Supports
  - ▶ Content Supports Guidelines
- ▶ Dictionary
- ▶ Extra Time
- ▶ Individualized Structured Reminders
- ▶ Language and Vocabulary Supports
  - ▶ Language and Vocabulary Supports Guidelines
- ▶ Large Print
- ▶ Manipulating Test Materials
- ▶ Math Manipulatives
- ▶ Oral/Signed Administration
- ▶ Projection Devices
- ▶ Spelling Assistance
- ▶ Supplemental Aids

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### Functional Capabilities that May Be Addressed with AT

- ▶ Reading (comprehension, decoding, vocabulary)
- ▶ Writing (mechanics, spelling, organization, expression)
- ▶ Math (computation, problem solving)
- ▶ Communication
- ▶ Recreation
- ▶ Seating/Positioning
- ▶ Hearing
- ▶ Seeing
- ▶ Self-Care
- ▶ Mobility
- ▶ Problem-solving
- ▶ Organization
- ▶ Behavior
- ▶ Specific task-related skills

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### Expectations for Use of AT



Routinely



Independently



Effectively

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### Additional IDEA Mandates

- ▶ Provision of AT devices/services if they can provide the student with access to school programs and activities (FAPE & LRE)
  - ▶ Special education
  - ▶ Related services
  - ▶ Supplementary aids and services
- ▶ IEP team consideration of the AT needs of each and every special education student during the development of his or her IEP
- ▶ AT is provided at no cost to family

Texas only

TEC allows for the transfer of an AT device for the continuing use of a student through the sale, lease, or loan of the device.

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## Reading Supports

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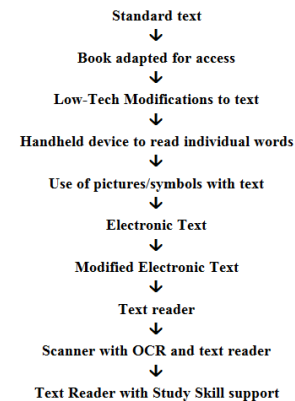
### Sample Tasks – Why Are You Thinking about AT Supports?

You want the student to be able to...

- ▶ Identify letters in isolation and in sequence
- ▶ Recognize/read name
- ▶ Read basic/primer sight words
- ▶ Read functional words (community, emergency, grocery, etc.)
- ▶ Read target/selected words within a sentence
- ▶ Comprehend age/grade appropriate reading materials
- ▶ Read print materials from textbooks and supplemental materials with comprehension
- ▶ Read material from worksheet with comprehension
- ▶ Read longer reading samples with comprehension and without fatigue
- ▶ Answer literal questions regarding materials read
- ▶ Answer questions regarding main idea of materials read

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### A Continuum of Considerations



WATL 2005

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### Standard Text

- ▶ Printed textbook
- ▶ Digital textbook
  - ▶ Pearson through iBooks
    - ▶ reading supports, video, audio, 3D animations and interactive graphics
  - ▶ Houghton Mifflin Harcourt
    - ▶ CD
    - ▶ DVD
  - ▶ McGraw Hill
    - ▶ connect ED online access

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### Book Adapted for Access

- ▶ Reading tabs / Post It notes
- ▶ Book or page stand
- ▶ Page turners
- ▶ Page fluffers

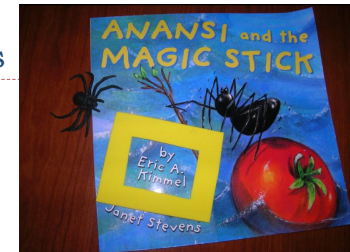
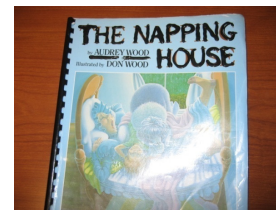
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### Low Tech Modifications to Text

- ▶ Highlighter tape
- ▶ Transparent Post-It Notes
- ▶ Color filters
- ▶ Reading guides
- ▶ Line markers
- ▶ Outline for reading
- ▶ Magnifier bar, sheet
- ▶ Divide longer reading passages into sections
- ▶ Wikki stix / puff paint / foam letters
- ▶ Frames
- ▶ Objects and tactiles
- ▶ Add symbols
- ▶ Reduce readability
- ▶ Add repeated line

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### Physical Adaptations



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### Physical Adaptations

I Love to Make Choices at Bath Time

I choose what to wash with

I saw a tree with leaves.

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### Repeated Story Line

- ▶ Use to support the main idea of each passage, page or chapter
- ▶ Each student should read the repeated story line or read the line as a choral response

I love to fly!

I have told him it's very easy, anyone can fly. All you need is somewhere to go that you can't get to any other way. The next thing you know, you're flying among the stars.

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### Adding Picture Supports

- ▶ Boardmaker Plus! v.6
- ▶ Communicate: Symwriter
- ▶ Picture It
- ▶ \*Writing With Symbols 2000

▶ [www.mayer-johnson.com](http://www.mayer-johnson.com)

▶ [www.suncastletech.com](http://www.suncastletech.com)

Chapter 1

Buck is a large dog. He lives in large home and is owned by the wealthy Judge Miller. Buck is loved by everyone. Buck thinks he is the boss of his home. Buck loved his home.

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### Sources for Symbolized Text

- ▶ News-2-You
- ▶ Exploring Science Series
- ▶ Simply Science
- ▶ [www.n2y.com/news2you/](http://www.n2y.com/news2you/)
- ▶ [www.attainmentcompany.com](http://www.attainmentcompany.com)
- ▶ [www.suncastletech.com](http://www.suncastletech.com)

CONSTITUTION DAY

America is celebrating Constitution Day on September 17.

The U.S. Constitution was signed that day in 1787.

What is a Constitution?

A Constitution gives the rules of a country.

To be an organism you must have specific qualities:

1. You must be able to MOVE. People, animals and plants can move, although plants have roots that keep them in one place. People and animals move around to find food and drink.

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## Sources of Free Symbolized Text

- ▶ University of North Carolina at Charlotte
  - ▶ Adapted chapter books
  - ▶ <http://access.uncc.edu/parent-teacher-and-educator-resources/assorted-general-curriculum-projects-adapted-texts>
- ▶ Paul V. Sherlock Center on Disabilities
  - ▶ Assorted adapted books
  - ▶ <http://www.ric.edu/sherlockcenter/wwslist.html>
- ▶ Baltimore City Public Schools
  - ▶ Adapted elementary books with communication boards
  - ▶ <http://www.baltimorecityschools.org/site/Default.aspx?PageID=1446>

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## Low Tech Adaptations to Text

- ▶ Changes in text size, fonts, spacing, color and background
- ▶ Sans serif preferred over serif fonts
  - ▶ Verdana
  - ▶ Century Gothic
  - ▶ Calibri
  - ▶ Lexia Readable ([www.k-type.com](http://www.k-type.com)) designed for dyslexia
  - ▶ Tiresias PC ([http://tiresias.org/fonts/fonts\\_download.htm](http://tiresias.org/fonts/fonts_download.htm)) designed for visual impairment
  - ▶ Sassoon <http://fontzone.net/font-details/sassooninfantstd>
  - ▶ Myriad Pro <http://www.fontpalace.com/font-download/MyriadPro-Regular/>
  - ▶ Open-Dyslexic [www.dafont.com/open-dyslexic.font](http://www.dafont.com/open-dyslexic.font)

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## Fonts and Spacing

The quick brown fox jumps over the lazy dog.

**The quick brown fox jumps over the lazy dog.**

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog.

**The quick brown fox jumps over the lazy dog.**

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## Low Tech Adaptations to Text

- ▶ **DECORATIVE**, condensed and *handwriting* styles are not effective
- ▶ Type size should be as big as possible, 16 to 18 point, with 12 point the minimum
- ▶ Keep to the same amount of space between each word
- ▶ Align text to the left margin
- ▶ Avoid indented paragraphs
- ▶ Spacing between lines should be wide enough to allow the reader to easily locate the next line of text:

Single leading is standard and easy to read	16 point leading is even easier to read	1.5 times leading is very easy to read	10 point leading is very hard to read
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### Low Tech Adaptations to Text

- ▶ Avoid blocks of CAPITAL LETTERS, underlining or *italics*
- ▶ Text should be printed with the highest possible contrast against the background
  - ▶ light (white or light yellow) letters on a dark (black) background are more readable
  - ▶ Dark letters (black or dark blue) on a light background (yellow or pale green) may be preferred
- ▶ Use solid background colors rather than textured or patterned
- ▶ Avoid glossy paper or thin paper

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### Handheld Device to Read Words / Text

- ▶ Reading pen ▶ [www.wizcomtech.com/](http://www.wizcomtech.com/)
- ▶ Portable speaking dictionary
- ▶ Franklin Anybook Reader
- ▶ Bookworm ▶ [www.ablenetinc.com](http://www.ablenetinc.com)
- ▶ Reading Time Communicator ▶ [www.enablingdevices.com](http://www.enablingdevices.com)
- ▶ Book Talker

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### High Tech Adaptations to Text

- ▶ Digital – creation, storage, and production
- ▶ Electronic text (e-text)
- ▶ Text Reader software
- ▶ Screen Reader software
- ▶ Test taking software
- ▶ MP3 and WAV file format
- ▶ CCTV
- ▶ Intel Reader
- ▶ MP3 and CD player
- ▶ Smartphones and tablets

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### Text Reader Software

- ▶ Write: Outloud ▶ [www.donjohnston.com](http://www.donjohnston.com)
- ▶ Read:Outloud
- ▶ Snap & Read
- ▶ WYNN ▶ [www.freedomscientific.com/](http://www.freedomscientific.com/)
- ▶ Kurzweil 3000 ▶ [www.kurzweiledu.com/](http://www.kurzweiledu.com/)
- ▶ Read&Write Gold ▶ <http://www.texthelp.com/North-America>



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### Free Text Reader Software

- ▶ Microsoft Word TTS      ▶ [Office 2010](#)
- ▶ Natural Reader          ▶ [www.naturalreaders.com/](http://www.naturalreaders.com/)
  
- ▶ WordTalk                ▶ [www.wordtalk.org.uk/Home/](http://www.wordtalk.org.uk/Home/)
  
- ▶ Balabolka               ▶ [www.cross-plus-a.com/balabolka.htm](http://www.cross-plus-a.com/balabolka.htm)
  
- ▶ TTS Reader             ▶ [www.sphenet.com/TTSReader/index.htm](http://www.sphenet.com/TTSReader/index.htm)

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### Test Taking Software

- ▶ WYNN                    ▶ [www.freedomscientific.com/](http://www.freedomscientific.com/)
  
- ▶ Kurzweil 3000        ▶ [www.kurzweiledu.com/](http://www.kurzweiledu.com/)
  
- ▶ Read&Write Gold    ▶ <http://www.texthelp.com>

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### Text Readers vs. Screen Readers

- ▶ Specialized software, called Text Readers and Screen Readers use voice synthesis to create spoken audio from text. Also know as text to speech technology (TTS.)
  
- ▶ **Text Reader:** allows for visual enhancements (size, color, visual tracking, and speech output modifications. Some programs require text to be selected).
  
- ▶ **Screen Reader:** allows for speech output modifications, provides Braille output. Reads everything on the screen including active windows (like web pages).

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### Text Readers with Scanning

- ▶ Scan and Read/Scan and Read Pro (Premier Assistive Technology)      ▶ [www.readingmadeez.com](http://www.readingmadeez.com)
  
- ▶ Read & Write Gold (textHELP Systems Ltd)      ▶ [www.texthelp.com/North-America](http://www.texthelp.com/North-America)
  
- ▶ Kurzweil (Kurzweil Educational Systems)      ▶ [www.kurzweiledu.com/](http://www.kurzweiledu.com/)
  
- ▶ WYNN (Freedom Scientific)      ▶ [www2.freedomscientific.com/lsg/products/wynn.asp](http://www2.freedomscientific.com/lsg/products/wynn.asp)

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### E-Text Readers

- ▶ Write:Outloud                      ▶ [www.donjohnston.com](http://www.donjohnston.com)
- ▶ Read:Outloud
- ▶ Snap & Read
- ▶ Text Aloud                            ▶ [www.NextUp.com](http://www.NextUp.com)
- ▶ E-Text Reader (Premier Assistive Technology)    ▶ [www.readingmadeez.com](http://www.readingmadeez.com)
- ▶ Natural Reader                      ▶ [www.naturalreaders.com/](http://www.naturalreaders.com/)
- ▶ TTS Reader                           ▶ [www.sphenet.com/TTSReader/](http://www.sphenet.com/TTSReader/)

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## Accessible Instructional Materials (AIM)

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### What are Accessible Instructional Materials?

- ▶ IDEIA 2004 requires that core instructional materials be provided in specialized formats when needed by students with disabilities.
  - ▶ “Specialized” is an alternate format (e.g. Braille, tactile graphics, large print, digital or audio) to support access to curriculum.
- ▶ IDEIA 2004 and TEC Section 31.028 require that local education agencies provide needed accessible core materials in a timely manner.
  - ▶ “Timely manner” is defined as “at the same time materials are available for students who do not need materials in an alternate format.”

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### What are “Specialized Formats”?

- ▶ Braille
- ▶ Digital text
- ▶ Audio
- ▶ Large print

**National Instructional Materials Accessibility Standard (NIMAS)**

**National Instructional Materials Access Center (NIMAC)**

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### Which Students Qualify to Receive NIMAS Files?

- ▶ Students qualify to receive NIMAS files at no cost to the education agency if they meet ALL of the following requirements:
  - ▶ The student qualifies for special education services and has an IEP.
  - ▶ The student's IEP team has determined that the student needs accessible instructional materials.
  - ▶ The student qualifies as a person with a print disability as defined by the 1996 Chafee amendment to the copyright law.

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### The Chafee Amendment to Copyright Law

- ▶ The Chafee Amendment established an exception to copyright protection for the reproduction of works for use by the blind or other persons with print disabilities.
- ▶ IDEIA 2004 specifies that students who qualify under the Chafee Amendment can receive digital files from the NIMAC through an Authorized User designated by the state at no cost.
- ▶ The four categories of eligibility under the Chafee amendment are:
  - ▶ Blindness
  - ▶ Visual disability
  - ▶ Physical Limitations
  - ▶ Reading disability from organic dysfunction.

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### Who Certifies a Student as Eligible?

- ▶ In order to qualify to receive digital files from the NIMAC, a “competent authority” must certify that the child meets the qualifications for the specific print disability.

**Competent Authority is defined in 36 CFR 701.6(b) (2).**

**In cases of blindness, visual disability or physical limitations, includes:**

Doctors of medicine, doctors of osteopathy, ophthalmologists, optometrists, registered nurses, therapists, professional staff of hospitals, institutions and public or welfare agencies (e.g. social workers, case workers, counselors, rehabilitation teachers, and superintendents.)

**In cases of a reading disability from organic dysfunction, includes:**

Doctors of medicine who may consult with colleagues in associated disciplines

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### How Do Schools Obtain NIMAS Files?

- Once a student has been certified eligible by an LEA's competent authority, the IEP team may take steps to obtain digital textbook files through Learning Ally or Bookshare.
  - Each campus can create an account.
  - There should be a central administrator

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### Accessible Media Producers for Texas

- ▶ Learning Ally
  - ▶ [www.learningally.org](http://www.learningally.org)
- ▶ Bookshare
  - ▶ [www.bookshare.org](http://www.bookshare.org)
  - ▶ [www.accessiblebooks4tx.org/](http://www.accessiblebooks4tx.org/)
- ▶ How to read books
  - ▶ Downloadable reader (exe)
  - ▶ Daisy Consortium reader
  - ▶ Learning Ally app
- ▶ How to read books
  - ▶ Internet Browser
  - ▶ Downloadable reader (exe)
  - ▶ DAISY Consortium reader
  - ▶ Read2Go app
  - ▶ Kurzweil app

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### Reading Assessments

- ▶ AIM Navigator
  - ▶ <http://aim.cast.org/navigator/page/>
- ▶ Stages Assessment Software
- ▶ PAR (Protocol for Accommodations in Reading)
  - ▶ <http://donjohnston.com/par/#.U9AGMxA7uM4>

**Formal Assistive Technology Evaluations**

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## Assessment Staff Making AT Decisions


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### What Do You Know about the Student's Reading?

- ▶ Poor word recognition
- ▶ Poor comprehension
- ▶ Poor vocabulary
- ▶ Embarrassment
- ▶ Lack of sound/symbol relationships
- ▶ Slow oral and/or silent reading
- ▶ Dislike for or avoidance of reading
- ▶ Poor prosody
- ▶ Inability to see materials
- ▶ Inability to hold materials
- ▶ Inability or slowness in finding or maintaining location when reading

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### What do we want to see change?

- ▶ Speed
  - ▶ Accuracy
  - ▶ Duration
  - ▶ Frequency
  - ▶ Latency
  - ▶ Quality
  - ▶ Quantity
  - ▶ Value (to student)
- 
- ▶ Spontaneity
  - ▶ Energy expended
  - ▶ Independence
  - ▶ Satisfaction
  - ▶ Level of support
  - ▶ Interest
  - ▶ Motivation
  - ▶ Participation

What is it we want the child to be able to do within the educational program, that he/she isn't able to because of his/her disability?  
A.C. Chambers from Has Technology Been Considered?

### Make Recommendations to ARDC

- ▶ Describe what you are recommending
- ▶ Describe what the expected outcome is for the student.
- ▶ Advise that technical support and / or training may be required
- ▶ Discuss timeline for support and / or training
- ▶ Determine what data needs to be collected to monitor expected outcome and
  - ▶ Who will collect data
  - ▶ Who will review data
- ▶ Write implementation plan with follow up dates
- ▶ FOLLOW UP

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