## **Assistive Technology Supports for Struggling Readers**

This document contains information on the range of assistive technology supports that can be used by struggling readers to increase reading proficiency Many of these supports also foster increased efficiency, productivity, independence, and enjoyment. In most instances, students use a combination of assistive technology supports to meet their reading needs. The types of assistive technology supports used to for reading are determined by individual student abilities and needs as well as the required reading tasks across all instructional environments.

In this document, assistive technology reading supports are organized into various categories based on the primary features or applications of the technology. Moreover, the age ranges for which the devices are appropriate are identified in the following categories: elementary, middle, and high school. Lastly, supports are linked to the various reading skills addressed in the Georgia Performance Standards GPS. The reading skills supported by assistive technology are briefly defined below. It is recommended that individuals utilizing this document refer to the standards to determine the specific skills that are addressed at each grade level.

The following skills areas are addressed in this document:

## **Alphabetics**

- Phonemic Awareness: Phonemic awareness refers to the ability to focus on and manipulate phonemes in spoken words.
- Phonics: Phonics is the ability to associate sounds with letters and use these sounds to form words

## Reading Fluency

• Fluency: Fluency is the effortless, automatic ability to read words in connected text.

## Comprehension

- Vocabulary: Vocabulary includes identifying the meanings of words and using those words appropriately within context.
- Comprehension: Comprehension is the complex cognitive process involving the intentional interaction between reader and text to convey meaning.

The assistive technology for reading supports referenced in this document are included to provide examples of different technologies used by students with disabilities to accomplish educationally relevant tasks in instructional and access areas. The document does not include all assistive technology devices within a specific category and inclusion of a particular support does not constitute endorsement by the Georgia Department of Education. Additional supports may be added to the document by contacting the Georgia Project for Assistive Technology.

Additional information about the assistive technology supports referenced in this document is available on the Georgia Project for Assistive Technology's website at http://www.gpat.org. Additional information about the Georgia Performance Standards is available on the Georgia Department of Education's website at http://doe.k12.ga.us.

**Compensatory Tools** 

Positioning Aids	Category	Examples	Αg	Age Range			SI	cill Are	ea	
Mountain Technology    Teacher-made slant boards with three-ring binders (office supply)    Teacher-made slant boards with three-ring binders (office supply)    Clipboard, binder clips (office supply)    Page-Up (office supply, Onion Mountain Technology)    Page-Up (office supply, Onion Mountain Technology)    Page Turners			Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency
Clipboard, binder clips (office supply)	Positioning Aids		Х	Х	Х					Х
Page-Up (office supply, Onion Mountain Technology)		Teacher-made slant boards with three-ring binders (office supply)		Χ						
Page Turners		Clipboard, binder clips (office supply)								
Page Turner (Zygo, Touch Turner, PageFlip)		Page-Up (office supply, Onion Mountain Technology)	Х	Х	Х					X
Tracking Aids  Reading Window (teacher made)  EZC Reader/Colored Reading Helper (Really Good Stuff, Onion Mountain Technology)  Bar Magnifier (Independent Living Aids)  Contrast Aids  Highlighter / Highlighting Tape (Crystal Springs Books, Onion Mountain Technology)  Acetate report covers (office supply)  Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)  Colored reading helpers (Onion Mountain Technology)  XXXXX  Colored reading helpers (Onion Mountain Technology)  XXXX  XXX  XXX  XXX  XXX  XXX  XXX	Page Turners	Page fluffers (teacher made)			Х	<u> </u>				Х
EZC Reader/Colored Reading Helper (Really Good Stuff, Onion Mountain Technology) X X X X X X X X X X X X X X X X X X X		Page Turner (Zygo, Touch Turner, PageFlip)	Х	Χ	Х					Х
Bar Magnifier (Independent Living Aids)  Contrast Aids  Highlighter / Highlighting Tape (Crystal Springs Books, Onion Mountain Technology)  Acetate report covers (office supply)  Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)  Colored reading helpers (Onion Mountain Technology)  X X X X X X X X X X X X X X X X X X X	Tracking Aids	Reading Window (teacher made)	Х	X	X	<u>                                     </u>				X
Contrast Aids  Highlighter / Highlighting Tape (Crystal Springs Books, Onion Mountain Technology)  Acetate report covers (office supply)  Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)  Colored reading helpers (Onion Mountain Technology)  X X X X X X X X X X X X X X X X X X X		EZC Reader/Colored Reading Helper (Really Good Stuff, Onion Mountain Technology)	Х	Χ	Х					Χ
Acetate report covers (office supply)  Acetate report covers (office supply)  Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)  X X X X X X X X X X X X X X X X X X X		Bar Magnifier (Independent Living Aids)	Х	Х	Χ					Х
Acetate report covers (office supply)  Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)  Colored reading helpers (Onion Mountain Technology)  Software supported text/background contrast  Word Identification  Aids  Hardware  Children's Talking Dictionary & Spell Corrector (Franklin)  Merriam Webster Speaking Dictionary and Thesaurus (Franklin)  Speaking Language Master (Franklin)  X X X X X X X X X X X X X X X X X X X	Contrast Aids	Highlighter / Highlighting Tape (Crystal Springs Books, Onion Mountain Technology)	X	X	X					X
Colored reading helpers (Onion Mountain Technology)  Software supported text/background contrast  Word Identification Aids  Hardware  Children's Talking Dictionary & Spell Corrector (Franklin)  Merriam Webster Speaking Dictionary and Thesaurus (Franklin)  Speaking Language Master (Franklin)  X X X X X X X X X X X X X X X X X X X		Acetate report covers (office supply)	Х	Χ	Χ					Χ
Software supported text/background contrast  Word Identification Aids  Hardware  Children's Talking Dictionary & Spell Corrector (Franklin)  Merriam Webster Speaking Dictionary and Thesaurus (Franklin)  Speaking Language Master (Franklin)  X X X X X X X X X X X X X X X X X X X		Colored Overlays (National Reading Styles Institute, See It Right, Irlen Institute)	Х	Χ	Х					Х
Word Identification Aids  Hardware Children's Talking Dictionary & Spell Corrector (Franklin) Merriam Webster Speaking Dictionary and Thesaurus (Franklin) Speaking Language Master (Franklin) X X X X X X X X X X X X X X X X X X X		Colored reading helpers (Onion Mountain Technology)								Х
Aids  Children's Talking Dictionary & Spell Corrector (Franklin)  Merriam Webster Speaking Dictionary and Thesaurus (Franklin)  Speaking Language Master (Franklin)  X X X X X X X X X X X X X X X X X X X		Software supported text/background contrast	Х	Х	Х					Х
Merriam Webster Speaking Dictionary and Thesaurus (Franklin)XXXXSpeaking Language Master (Franklin)XXXX	Word Identification	Hardware								
Speaking Language Master (Franklin) X X X X X X	Aids		Х							
			X	X	X			X	X	
Reading Pen (Wizcom Technologies)  X X X X X X X X X X X X X X X X X X X									Х	
		Reading Pen (Wizcom Technologies)	Х	Х	Х			Х	Χ	

Category	Examples	Ag	e Ran	ge Skill Area								
		Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency			
Word Identification	Computer-Based											
Aids (continued)	WordWeb Dictionary Thesaurus (WordWeb Software)	Х	Х	Х			Х	Х				
	On-line Dictionaries (Internet-based)	Х	Χ	Х			Х	Χ				
Standalone	Hand-held or Stand magnifier (Maxi-Aids, Independent Living Aids, LS&S)	X	Х	X	<u> </u>				X			
<b>Magnification Aids</b>	Binocular and monocular telescope (Maxi-Aids)	Х	Х	Х					Х			
_	Video Magnifier or CCTV (Independent Living Aids)	Х	Х	Χ					Х			
Specialized Format	Large Type Books Local libraries and bookstores Georgia Instructional Materials Center (www.gimc.org) American Printing House for the Blind-Louis Database (www.aph.org)	X X X	X X X	X X X					X X X			
	Braille Books											
	Georgia Instructional Materials Center (www.gimc.org)	Х	Х	Х					Х			
	National Braille Press (www.nbp.org)	Х	Χ	Χ					Х			
	American Printing House for the Blind (www.aph.org)	Х	Х	Χ					Х			
	Audiobooks											
	Local public libraries	Χ	Χ	Χ			Χ	Χ	Х			
	Local bookstores	Χ	Χ	Χ			Χ	Χ	Χ			
	Recordings For the Blind & Dyslexic ( <u>www.rfbd.org</u> ) (available by membership only and requires specially formatted players such PlexTalk Pocket)	X	Х	Χ			Х	Х	Х			
	GLASS, National Library Service (http://www.loc.gov/nls/) (available by membership only and requires specially formatted players such BookPort Plus or Victor Reader series)	х	Х	Х			Х	Х	х			
	Online bookstores ( <u>www.amazon.com</u> , <u>www.audiobooks.com</u> , <u>www.audible.com</u> )	Х	Χ	Χ			Х	Χ	Χ			

Category	Examples	Αg	je Ran	ge				ea	
		Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency
Specialized Format	Electronic Books (eBooks)								
(continued)	Project Gutenberg ( <u>www.gutenberg.org</u> ) Text files work with any text reading software	Х	Х	Х					Х
	eBookMall ( <u>www.eBookMall.com</u> ) Books available for Microsoft Reader, eReader, MobiPocket, Palm Reader	Х	Х	Х					Х
	eReader ( <u>www.ereader.com</u> ) Works with eReader, eReader Pro software only	Х	Х	Х					Х
	MobiPocket ( <u>www.mobipocket.com</u> ) Works with MobiPocket software only	Х	Х	Х					Х
	BookShare ( <u>www.bookshare.org</u> ) (available by membership only)	Х	Х	Х					Х
	Accessible Book Collection ( <u>www.accessiblebookcollection.org</u> ) (available by membership only)	Х	Х	Х					Х
	Access to Ebooks via Portable Text Readers								
	Classmate (Don Johnston, Humanware)	Х	Х	Х			Х	Х	Х
	Intel Reader (Don Johnston)	Х	Х	Х			Х	Х	Х
	eBook Readers	Х	Χ	Χ					
	Multipurpose eBook Readers	Х	Х	Х					
	Access to Ebooks via Computer-Based Text Reading Software								
	eReader Pro (Barnes & Noble)								
	Microsoft Reader (Microsoft)								
	Digital Audio Files								
	Project Gutenburg (www.gutenberg.org/wiki/gutenberg)	Х	Х	Х			Х	Х	Х
	Teacher made files	Х	Х	Х			Χ	Χ	Χ

Category	Examples	Αç	je Ran	ige		S	kill Ar	ea	
		Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency
	To 110 October 15th October 15t								
Specialized Format (continued)	Text to Sound File Conversion Software	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				\ \ \	
(continuea)	Alive Text to Speech (AliveMedia, Inc)	X	X	X	1		X	X	X
	TextAloud (NextUp) Text To Audio (Premier AT)	X	X	X			X	X	X
	Advanced Reading & Writing Aid feature (Kurzweil 3000, WYNN, Read&Write Gold)	X	X	X			X	X	X
	Advanced Reading & Willing Aid Teature (Ruizweii 3000, Willing, Read&Wille Gold)		^	^			^	^	
	Access for Digital Audio Files								
	Access for Digital Audio Files	X	Х	X				Х	X
	Portable digital recorder (retail stores)  Portable MP3 player (retail stores)	-	X	X			X	X	X
	Computer	X	X	X			X	X	X
	Windows Media Player (Microsoft)	X	X	X			X	_ ^ _ X	X
	QuickTime (Apple)	X	X	X			X	X	X
	Ф Quick Filite (Арріе)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \							
Supported Format	Thinking Reader (Tom Snyder)	Х	Х	Х			Х	Х	Х
	Start-to-Finish Literacy Starters (Don Johnston)	Х	Х	Х			Х	Х	Х
	Start-to-Finish Library (Don Johnston)	Х	Χ	Х			Х	Х	Χ
	Start-to-Finish Core Content (Don Johnston)	Х	Х	Х			Х	Х	Х
Alternative Format	News-2-You (www.news-2-you.com)	Х	Х	Х			Х	Х	Х
	Weekly Reader Ablenet Edition ( <u>www.ablenetinc.com</u> )	Х	Х	Х			Х	Х	Х
	News 4 You ( <u>www.mayer-johnson.com</u> )	Х	Х	Х			Х	Х	Х
	Read and Tell Series ( <u>www.slatersoftware.com</u> )	Х	Х	Х			Х	Х	Х
	Graphic word processors (refer to graphic word processors)	Х	Χ	Х			Χ	Х	Χ

Category	Examples	Αg	je Ran	ge		ea			
		Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency
Text Reading Software	Text								
(visual and/or auditory)	ReadPlease Free 2003 (ReadPlease)	Х	Х	Х			Х	Х	Х
,	Natural Reader (NaturalSoft, Ltd)	Х	Х	Х			Х	Х	Χ
	Microsoft Reader (Microsoft)	Х	Х	Х					Χ
	E-Text Reader (Premier AT)	Х	Х	Х			Х	Х	Х
	Universal Reader (Premier AT)	Х	Х	Х			Χ	Х	Χ
	Text to speech software for Palm OS (Handango)	Х	Х	Х			Χ	Х	Х
	ClipRead/LiveInk (www.liveink.com)	Х	Х	Х					Х
	PDF								
	Adobe Reader (Adobe)	Х	Х	Х			Х	Х	
	Text and PDF								
	Kurzweil 3000 (Kurzweil)	Х	Х	Χ			Χ	Х	Χ
	Read and Write Gold (TextHelp)	Х	Х	Х			Χ	Х	Χ
	WYNN (Freedom Scientific)	Х	Х	Χ			Χ	Х	Χ
Standard Word	Microsoft Word (Microsoft)	Х	Х	Х	Ì		Х	Х	Х
Processing Software	WordTalk ( <u>www.wordtalk.org.uk</u> )	Х	Χ	Χ			Χ	Х	Χ
	Word Perfect (Corel)	Х	Х	Χ			Х	Х	Χ
Graphic Word	Writing With Symbols (Mayer Johnson)	Х	Х	Х	İ		Х	Х	Х
Processing Software	Communicate:SymWriter (Widgit)	Х	Х	Х			Х	Х	Х
	Clicker (Crick Software)	Χ	Χ	Χ			Χ	Χ	Χ
	PixWriter (Slater Software)	Χ	Χ	Х			Χ	Χ	
	Classroom Suite (IntelliTools)	Χ	Х	Х			Χ	Χ	Χ

Category	Examples	Ag	je Ran	ge		S	kill Ar	ea	
		Elementary	Middle School	High School	Phonemic Awareness	Phonics	Vocabulary	Comprehension	Fluency
Talking Word Processing Software	WriteOutLoud (Don Johnston) Boardmaker Plus (Mayer-Johnson) Talking Word Processor (Premier AT) Read & Write (TextHelp) Tex-Edit Plus (Trans Tex Software)	X X X X	X X X X	X X X			X X X X	X X X X	X X X X
Academic Suite Software	Classroom Suite 4 (Intellitools) SOLO 6 (Don Johnston)	X	X	X	Х	X	X	X	X
Advanced Reading & Writing Aid Software	Kurzweil 3000 (Kurzweil Educational Systems) Read & Write Gold (TextHelp) TestTalker (Freedom Scientific) WYNN (Freedom Scientific)	X X X X	X X X	X X X			X X X	X X X	X X X
Screen Enlargement Software	ZoomText (Ai Squared) MAGic (Freedom Scientific)	X	X	X					X
Screen Reading Software	JAWS (Freedom Scientific) Window Eyes (GW Micro)	X	X	X			X	X	X
Braille Reading Software	Duxbury (Duxbury Systems)  MegaDots (Duxbury Systems)	X	X	X					X