Digital Tools and Strategies to Support Reading
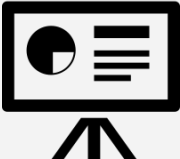
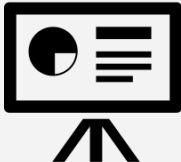| Common Student Challenges Related to Reading	
- Accessing Text - Decoding Text - Reading Fluency	- Comprehension - Executive Function Skills

Lack of academic ability is a common challenge that prevents students from completing class activities successfully. One of the abilities that students often struggle with is reading. Digital environments offer students many flexible options that can support reading. The table below presents four key elements of reading and describes how digital environments can provide features that support these four areas.

Elements	Features of Digital Environments that Support Reading	Digital Tools with these Features
Access to Text *(Display of Information)*	- Addresses student visual preferences; makes reading more comfortable by altering text and page - Provides options for changes to font size and style, text color and background color, spacing, and margins - Offers a more simplified and focused view by focusing on a particular line, paragraph, or page - Adjusting the number of words on a page; less text can be less intimidating	**Integrated In OS** - Ease of Access (Windows) - Accessibility (Mac) **Chrome Extensions** - Mercury Reader - Just Read - Read Mode - More - Print Friendly
Decoding and Reading Fluency & Vocabulary	- Provides synonyms, definitions, and hyperlinks to know the meanings of unknown words - Offers a reduction in difficulty level of reading text descriptions and images - Translation - Allows easy translation of the text into various languages - Offers text-to-speech option which can help with jodecoding and comprehension. When using less energy, decoding can reduce the cognitive load.	**Chrome Extensions** - Read&Write for Chrome - Snap and Read - Fluency Tutor - Natural Reader **Integrated with OS** - How to turn on Mac TTS - How to turn on Windows Narrator
Comprehension	- Supports note-taking and marking up the text via highlighting, bookmarking, margin notes, outlining, drawing along with a means of gathering and grouping notes for post-reading review - Teachers can leave annotated comments, provide sketches, comprehension questions, etc.; students can also annotate key areas - Students can highlight text in different colours	**Chrome Extensions** - Scribl - Kami **Web Tools** - Newsela - TweenTribune - Wonderopolis

	Executive Function	
	• Supports movement within and between documents via search functions, links, embedded menus, and table of contents	**Web Tools** • Google Docs

The table below shows popular reading apps on tablets with integrated features to support students with common challenges related to reading.

	iBooks & Kindle App (Free)	Learning Ally (Free for Qualifying Students)	Voice Dream (Paid)
Access to Text *(Display of Information)*	• 4 types of color themes • slider to adjust brightness • increase font size 11x	• 3 types of color themes • slider to adjust font size • 3 types of text highlight colours as it speaks	• slider of colours for each item of the document, including background • choose from many fonts • increase font size • increase margins, lines spaces
Decoding and Reading Fluency & Vocabulary	• switch from page view to scrolling (infinite page) view • jump to chapter or bookmark • resume reading • jump to section based on a word or phrase	•only infinite page view •jump to chapter or bookmark • jump to page number • resume reading	• switch from page view to scrolling (infinite page) view • jump to chapter or bookmark • resume reading • jump to section based on a word or phrase • jump to next paragraph
Comprehension	• spoken text as highlight • look up definition/synonym • slider adjusts reading speed	• speak text as highlight • look up definition/synonym •Image descriptions •Slider adjusts reading speed	• spoken text • slider adjusts reading speed • choose from many voices • look up definition/synonym
Executive Function	• add note • add highlights in 4 different colours or underline in red. • access notes and highlights chronologically	• add note • no option to highlight • access notes chronologically	• add playback notes • add highlight in many colours • view highlights chronologically

Strategies to Further Support Reading

Teachers can help students find an optimal reading environment by discussing and exploring their sensory preferences.

Visual	Prefers subtle lighting (may provide greater comfort and focus) ● Salt lamps, unscented candles, glowing diffuser ● Hoodie – provides focus by removing peripherals
Auditory	Prefers music (sets a rhythm) ● Focusatwill.com: scientifically optimised music to help focus, based on preferences ● Quiet space – may be sensitive to low frequency sound (refrigerators, smoke alarms, clocks)
Tactile	Seeks surfaces that give good tactile feedback ● Chair with pillow/ cushion, fidget
Movement-Seeking	Prefers a busy environment, such as a coffee shop ● Bouncing or rotating chair or a standing desk

Additional Suggested Resources:

- The Reading Brain in a Digital World, Interview with Maryanne Wolf (Curious Minds Podcast)

- 7 Chrome Tools for Kids with Reading Challenges (Understood.org)
- Apps for Kids who Struggle with Reading (Understood.org)