

THE HAMILTON INSTITUTE

AT WHEELER

Assistive Technology: Reading and Writing

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Middle School Resource Teacher, The Hamilton School at Wheeler

Assistive Technology

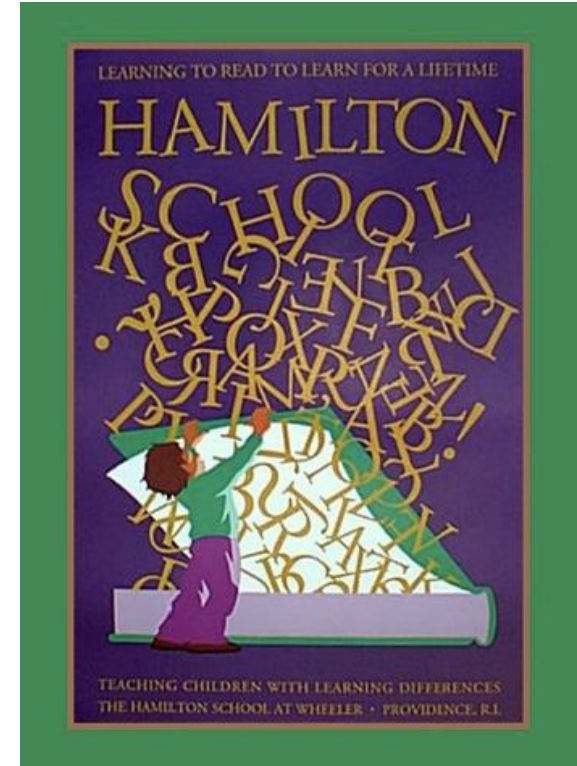
"...any item, piece of equipment, or product system...that is used to increase, maintain, or improve functional capabilities of a child with a [learning difference]." *IDEA 2004*

“For people who struggle to read text, technology can be a lifeline. An audiobook, for example, allows them to experience a story they might not be able to access with a traditional book. These assistive technology (AT) tools for reading are inexpensive and easy to find. But with so many tools out there, it’s not always easy to know which ones to use.” [Understood.org](https://www.understood.org)

Assistive Technology Philosophy

The Hamilton School at Wheeler

“Hamilton is committed to the use and explicit instruction of digital assistive technology. These technologies provide students with access to content knowledge and vocabulary that matches their intellectual curiosity. This allows students to practice taught skills, acquire important information, and demonstrate knowledge. Technology use may vary at each grade level, taking into consideration students’ needs.”



Why use Assistive Technology (AT)?

- *Improves fluency- accuracy, pace, expression- comprehension, vocabulary; written expression*
- *Evens the 'playing field' for LD students (pace, volume)*
- *Independence and lifelong learning*

When should students be introduced to AT?

- *Before they HAVE to use it*
- *'Learning to Read' shifts to 'Reading to Learn'*

How is AT blended with reading and writing?

- *Specific assignments (independent reading log)*
- *All subject areas in which decoding is not the goal*

Tools

- *Computer/smartphone*
- *Headphones and microphones*
- *Noise-cancellers*

Implementation

- *Skills need to be explicitly instructed*
- *Reinforced and practiced often*
- *Choosing the right tool at the right time*
- *Troubleshooting*

Accessibility

- *Many apps/programs require licenses, Wifi or data*
- *Can tools be used at home? The next school?*

Perceptions and “Myths”

- *“I didn’t read. I listened.”*
- *“Why do THEY get to Voice-Type?!”*
- *“Will she ever learn to read / spell?”*
- *“Will they be ready for high school?”*



Vocabulary Preview

Audiobooks

Speech-text

Ear reading

Extensions

Voice-typing

Text-speech

Apps

Eye reading

“App smashing”

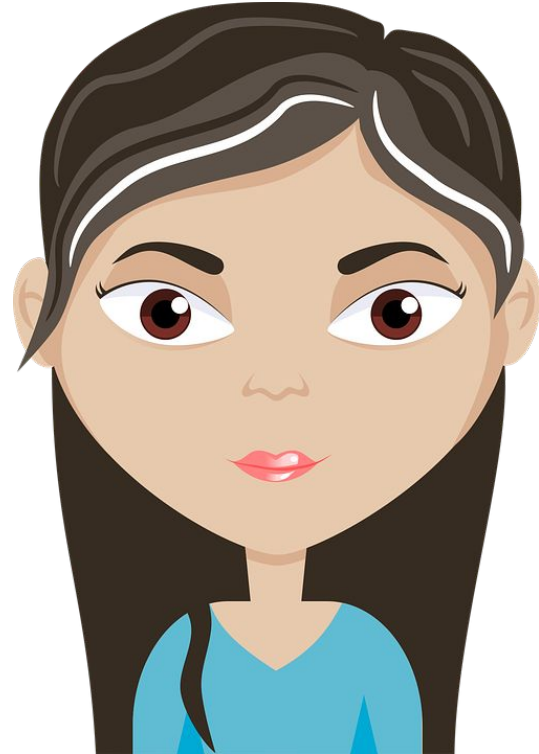
Multisensory

ear



+

eye



Simultaneous Eye and Ear Reading (SEER)

Or just “ear reading”

“Students with dyslexia are often smart enough to handle vocabulary at a much higher level than what they can read. Ear reading helps bridge that gap. With audiobooks, students can take in the same books that their peers are reading—just in a different format.”





read&write



Word
Prediction

Picture
Dictionary

Text to Speech

Audio Maker

Screen Mask

Speech to Text

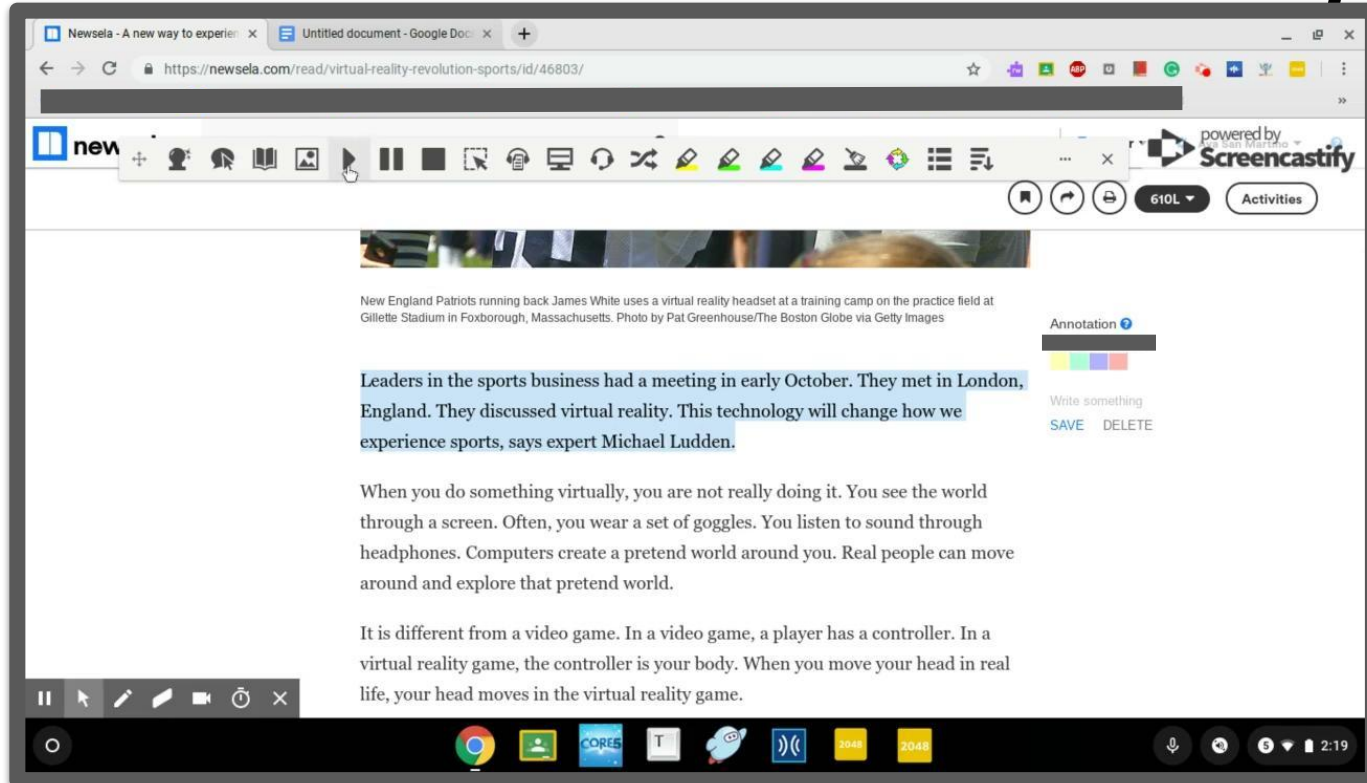
Translator

Highlighter

Read Along

Reading, Writing and Comprehension Support

Read & Write / *texthelp*



The screenshot shows a web browser window with two tabs: "Newsela - A new way to experie..." and "Untitled document - Google Doc...". The address bar shows the URL "https://newsela.com/read/virtual-reality-revolution-sports/id/46803/". The page content includes a photo of a football player and a text block with a blue highlight. A toolbar with various icons for text-to-speech and reading assistance is overlaid on the page. The toolbar includes icons for a person, a magnifying glass, a book, a play button, a pause button, a stop button, a refresh button, a speech bubble, a list, a pencil, a highlighter, a eraser, a magnifying glass, a speech bubble, a list, a pencil, a highlighter, and an eraser. The toolbar also includes a "powered by" logo for "ScreenCastify" and a "610L" dropdown menu. The text in the article reads: "New England Patriots running back James White uses a virtual reality headset at a training camp on the practice field at Gillette Stadium in Foxborough, Massachusetts. Photo by Pat Greenhouse/The Boston Globe via Getty Images" and "Leaders in the sports business had a meeting in early October. They met in London, England. They discussed virtual reality. This technology will change how we experience sports, says expert Michael Ludden." Below this is another paragraph: "When you do something virtually, you are not really doing it. You see the world through a screen. Often, you wear a set of goggles. You listen to sound through headphones. Computers create a pretend world around you. Real people can move around and explore that pretend world." and a final paragraph: "It is different from a video game. In a video game, a player has a controller. In a virtual reality game, the controller is your body. When you move your head in real life, your head moves in the virtual reality game."

Read & Write / *texthelp*



Speechify

Multiple Ways to Listen



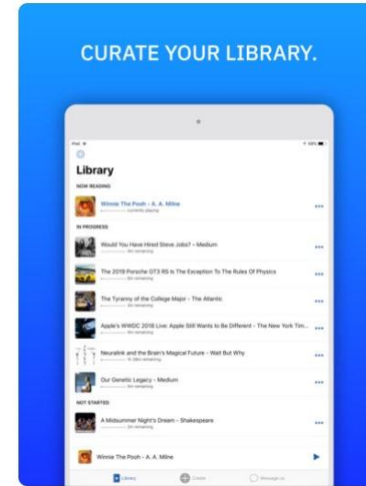
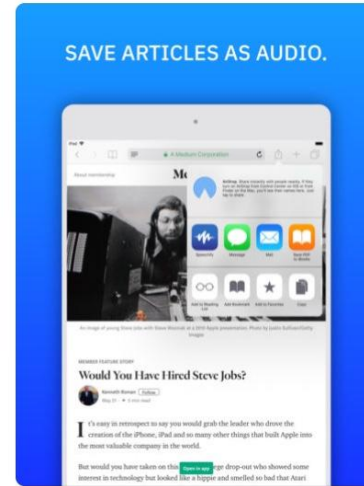
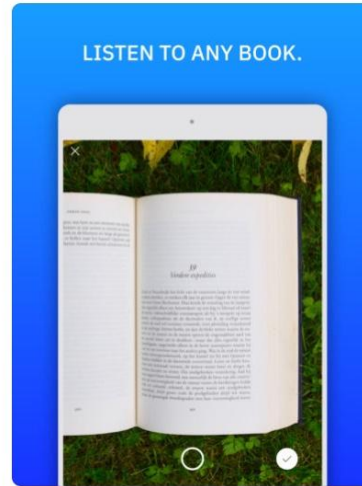
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1. Copy/paste

Text or link

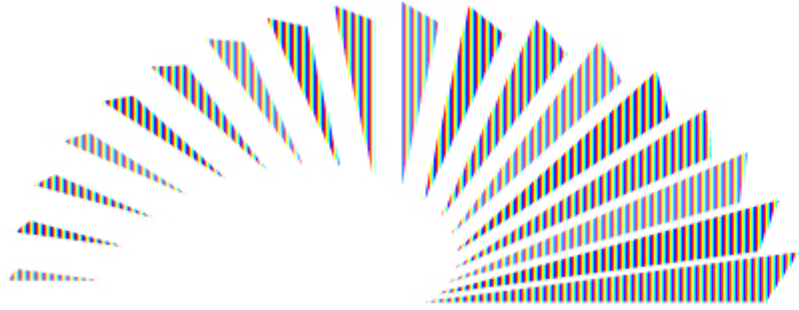
2. Load PDF

3. Camera





Text-Speech App or Chrome Extension



Books |

Bookshare

1. Ebooks, mags, newspapers
2. FREE for LD
3. Book reader app to listen or app smash with Speechify





Human Voice Ear and Eye Reading

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Grade ▼

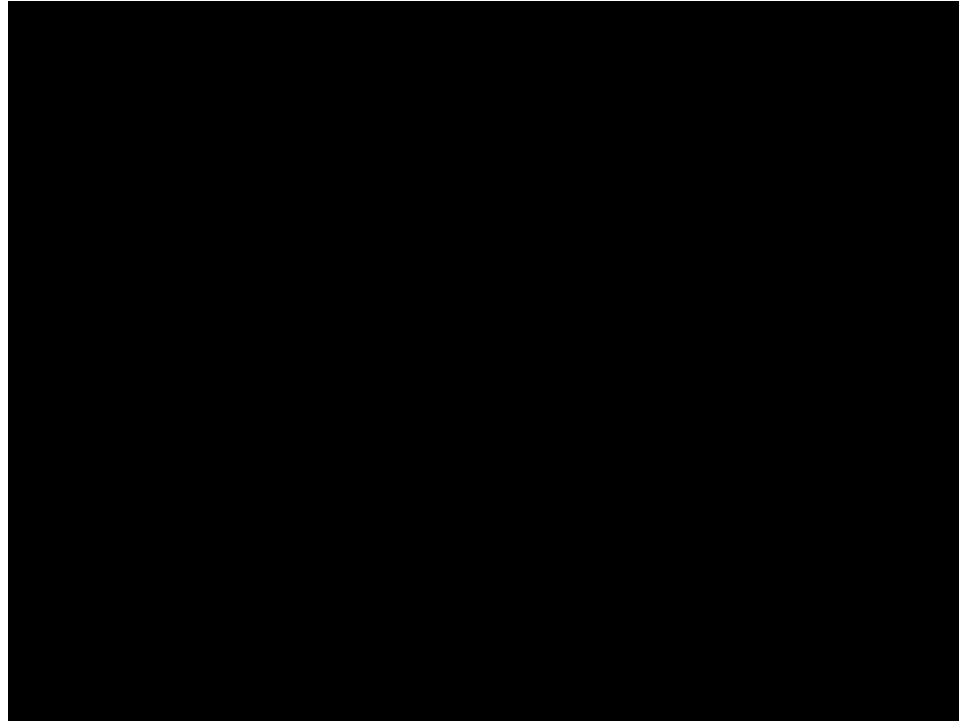
Lexile Level ▼

Subject ▼

Category ▼

Check out our latest books with highlighted text!

[Why highlight](#)

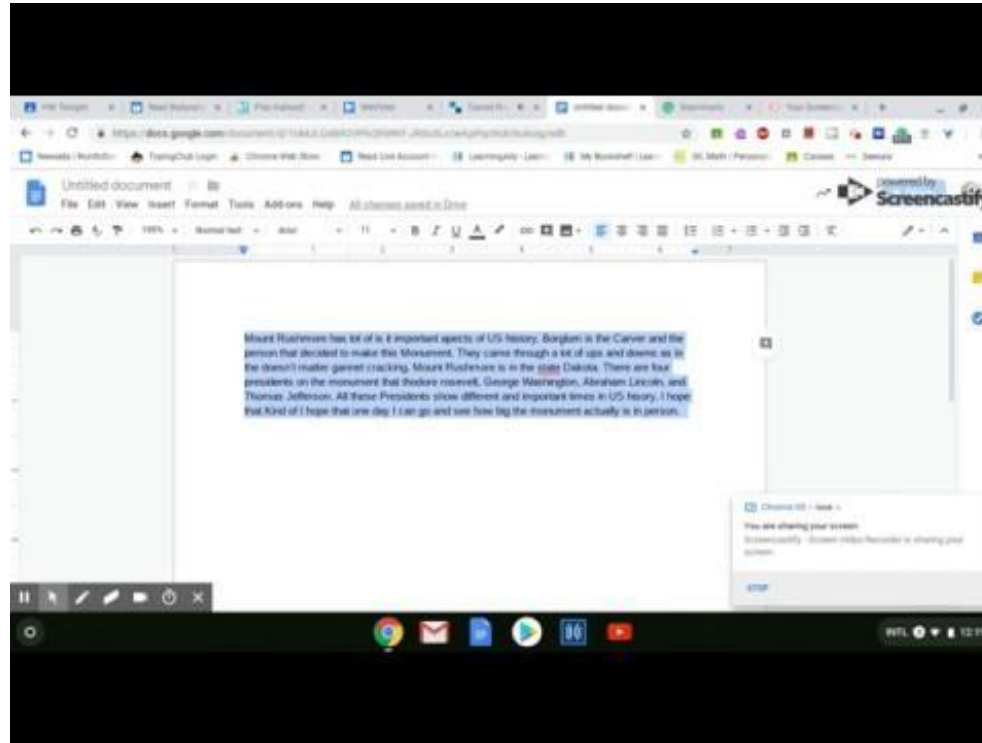


Independent Reading with Learning Ally



grammarly

Grammarly



Editing Chrome Extension or Web-Service



Read
Naturally[®]
Live

Read Naturally *Live*



ReadLive

Check out their [website](#) to learn more about how it works and to see what the platform looks like.

There's a 60-day free trial!

Fluency and Comprehension App or Web-Service

Read Naturally Live and App Smashing

- Hear Vocabulary ❖ Increase listening speed with audio-extension
- ‘Read Along’ ❖ Voice-Type responses
- Reading Fluency ❖ Grammarly for editing quiz responses
- Comprehension ❖ Proof-*listen* with Read&Write or Speechify

Grade	Percentile	Fall WCPM*
3	90	128
	75	99
	50	71
	25	44
	10	21
4	90	145
	75	119
	50	94
	25	68
	10	45
5	90	166
	75	139
	50	110
	25	85
	10	61
6	90	177
	75	153
	50	127
	25	98
	10	68
7	90	180
	75	156
	50	128
	25	102
	10	79
8	90	185
	75	161
	50	133
	25	106
	10	77



**How could you incorporate
Assistive Technology to
promote reading and writing?**

UNLOCK THE POWER
OF YOUR
DYSLEXIC MIND

22 Assistive Technology Tools
for Students



Host of the top iTunes Podcast "The Dyslexia Quest"

ELISHEVA SCHWARTZ

Check out this resource!

[22 Assistive Technology Tools for Students](#)

Credit: Elisheva Schwartz

Further Resources...

[Yale Center for Dyslexia: Tech](#)

Jamie Martin, [AIM Institute](#)

[edtechupdate.com](#)

[Understood.org](#)

[Dyslexic Advantage Magazine](#)

[dyslexiaida.org](#)

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Free early reading screenings and learning opportunities throughout the year!