Assistive Technology Solutions for Reading

Carolyn Phillips & Rachel Wilson, Tools for Life

With contributions from Martha Rust, Liz Persaud, Ben Jacobs & Ben Satterfield

www.gatfl.org

For Handouts: http://www.gatfl.gatech.edu/tflwiki

EASI Webinar Series 2015
March 12
2:00 PM to 3:00 PM

www.amacusg.org

Description

Technology can help all students achieve academic success! This webinar is focused on assistive technology solutions for reading. Presenters will share some of the basic difficulties individuals with learning disabilities encounter when they are reading and then provide examples of how low, mid and high assistive tech devices are creating solutions. Discussion will focus on specific environments and how these devices are assisting people living with various learning disabilities in college. Strategies, solutions and resources that provide supports will be discussed.

For Handouts: http://www.gatfl.gatech.edu/tflwiki

AMAC

AMAC Accessibility is a social change organization on a mission to create affordable services for governmental, private and non-profits organization working with individuals with disabilities. Services include e-text, braille, captioning, assistive technology, office management software and consulting.

Accessibility Made Smart

AMAC creates practical solutions that work, with a focus on utility, ease of use, and high quality.

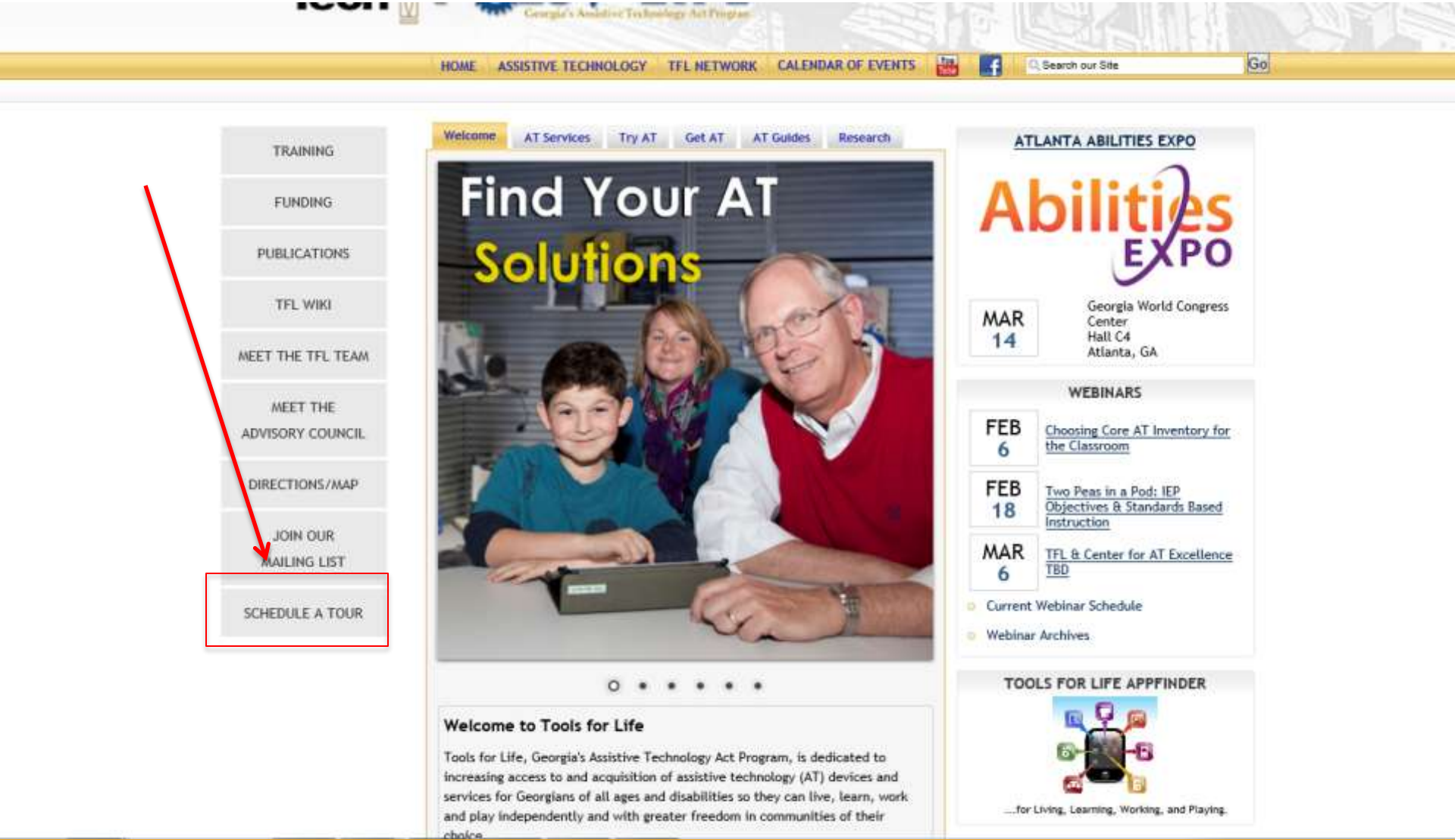
- **Accessibility Consulting** focuses on organizational accessibility needs with evaluation, technical assistance, customer support, and website accessibility solutions.
- **Braille Services** produces customized projects from both print materials and electronic text including partial books and chapters or graphics only using cutting-edge technology.
- **Captioning Services** makes classrooms, meetings, labs and other audio environments fully accessible for deaf or hard-of-hearing.
- **Professional E-Text Producers** provide high-quality e-text in many formats such as PDF, DOC, DAISY, and HTML.
- **Certified Assistive Technology team** provides on-site and remote assessments, demonstrations, training and technical assistance for education, work, and daily living environments.

For more information, please visit our website at www.amacusg.org

Tools for Life Mission

We’re here to help Georgians with disabilities gain access to and acquisition of assistive technology devices and assistive technology services so they can live, learn, work, and play independently in the communities of their choice.

Come Visit Us!



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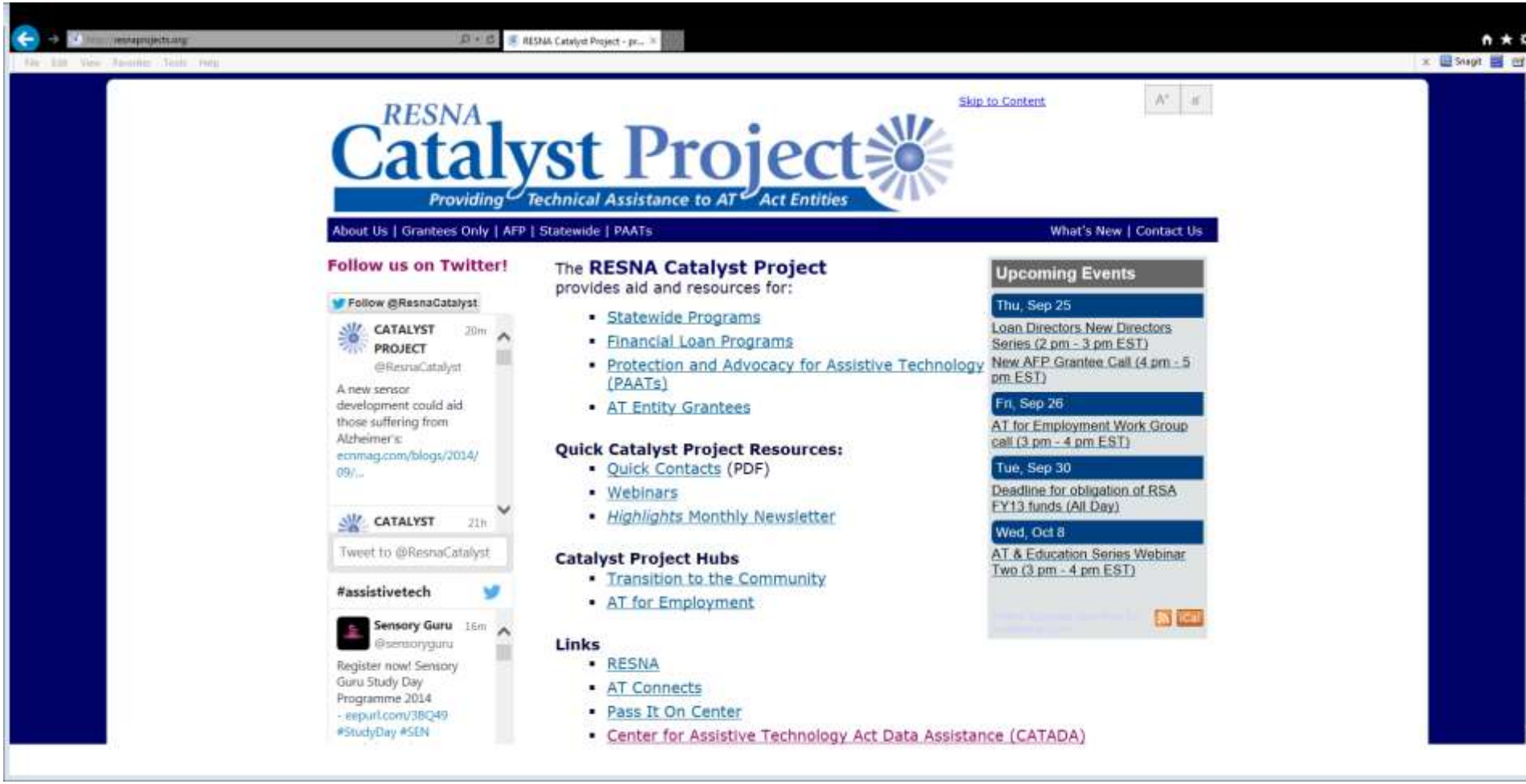
TFL AppFinder

Get to Know Your AT Act Program



- http://resnaprojects.org/

Why Assistive Technology?

- For a person without a disability, technology makes things easier….
- For a person with a disability, technology makes things possible.
- **TIP: USE AT. I have yet to meet a successful student with disabilities who doesn't use Any AT.**

What is Assistive Technology?

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Accessibility for All

Assistive Technology Device

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

- Public Law 105-394 [29 USC 2201]

Low/No-tech

- pencil grip
- adapted books
- slant board
- highlighters, tape
- magnifiers
- color coding
- read to out loud
- picture schedule
- strategies for memory
- colored transparencies
- Proof readers
- note taker

Mid-Tech

- word prediction
- text to speech
- speech to text
- spell checkers
- talking calculators
- digital recorders
- organizers
- e-books
- adapted keyboard
- adapted mouse
- adapted toys
- CCTV
- apps under $100

High-Tech

- computer/laptops
- tablets/phablets
- smartphones,
- smartpens
- OCR scanner/software
- magnification software
- speech output devices
- switch, joystick access
- scanning access
- voice recognition
- environmental control devices
- apps over $100

Assistive Technology Continuum

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Observations & "Hanging out with Intent"

Assistive Technology is a **continuum of tools, strategies, and services** that match a person's needs, abilities and tasks.

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Moving from Information to Action

Evaluations for Learning Disabilities

- One to one assessment
- Comprehensive battery of tests
- Detailed report with recommendations for support in work and/or learning

- What did You learn in your LD Evaluation?
- Moving from Information to Action
  - Using your Evaluation results as an Action Plan for AT

Moving from Information to an AT Action Plan

Auditory Processing Disorder (APD)

- "Also known as Central Auditory Processing Disorder, this is a condition that adversely affects how sound that travels unimpeded through the ear is processed or interpreted by the brain. Individuals with **APD do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard.** They can also find it difficult to tell where sounds are coming from, to make sense of the order of sounds, or to block out competing background noises."

- What does this information tell us regarding our AT Action Plan?

http://ldaamerica.org/types-of-learning-disabilities/

Moving from Information to an AT Action Plan - Dyscalculia

Dyscalculia

- "A specific learning disability that affects a person's ability to understand numbers and learn math facts.
- Individuals with this type of LD may also have:
  - poor comprehension of math symbols,
  - may struggle with memorizing and organizing numbers,
  - have difficulty telling time, or
  - have trouble with counting."

- What does this information tell us regarding our AT Action Plan?

http://ldaamerica.org/types-of-learning-disabilities/

Moving from Information to an AT Action Plan - Dyslexia

Dyslexia

- A specific learning disability that affects reading and related language-based processing skills. Dyslexia is sometimes referred to as a Language-Based Learning Disability.
- The severity can differ in each individual but can affect:
  - reading
  - fluency,
  - decoding,
  - reading comprehension,
  - recall,
  - writing,
  - spelling, and
  - sometimes speech and can exist along with other related disorders.
- What does this information tell us regarding our AT Action Plan? http://ldaamerica.org/types-of-learning-disabilities/

The "FAST" Track

- **Frustration**
- **Anxiety**
- **Stress**
- **Tension**

Human Activity Technology (HAAT) Model

- Human: represents the skills and abilities of the person with a disability
- Activity: a set of tasks to be performed by the person with a disability
- Context: the setting or social, cultural and physical contexts that surround the environment in which the activity must be completed
- Assistive Technology: devices or strategies used to bridge the gap between the person's abilities and the demands of the environment

- Developed by Cook & Hussey

The SETT Framework

S = Student/Skills

E = Environment

T = Tasks

T = Tools

Adapted from Joy Zabala www.joyzabala.com

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AT Solutions for Reading

Low Tech AT Solutions

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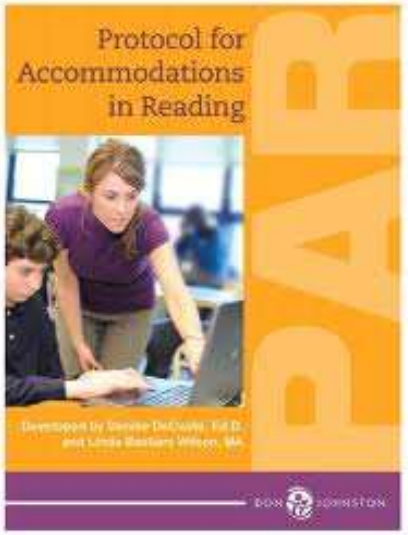
PAR: Protocol for Accommodations for Reading

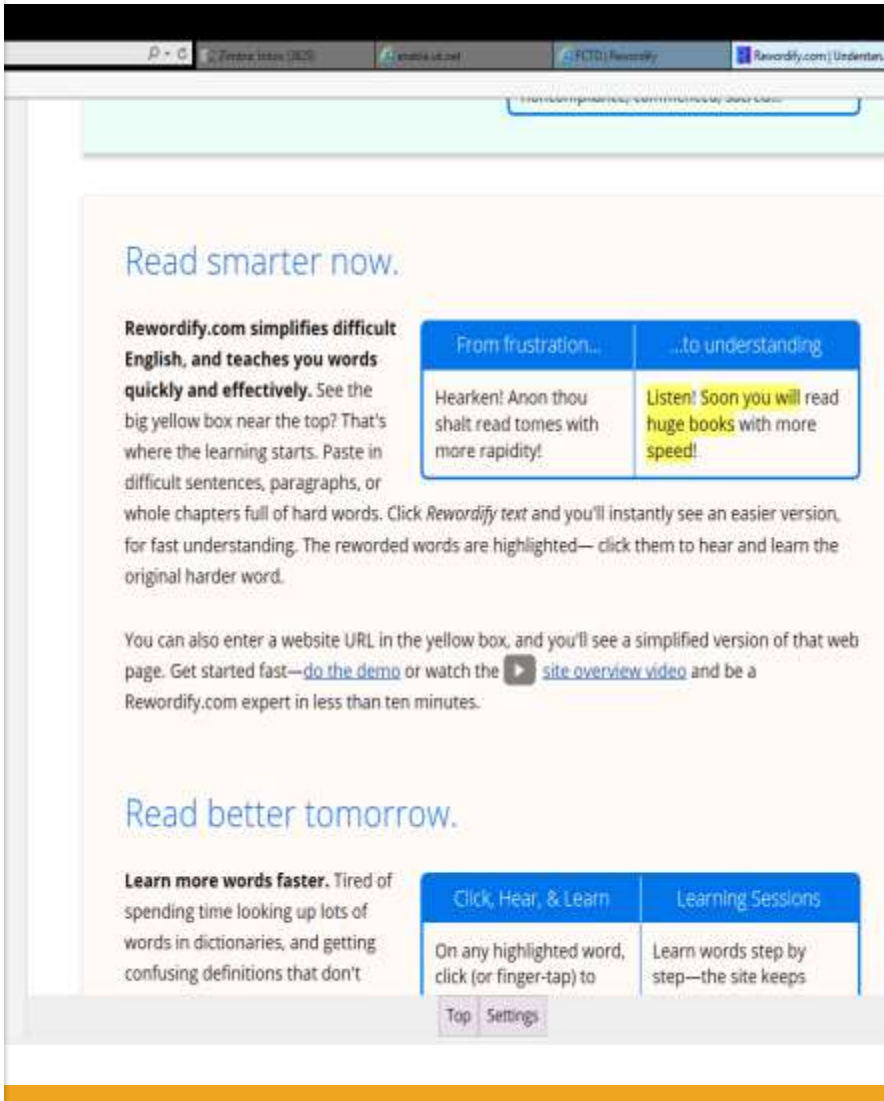
- Don Johnston
- Assist with accommodations for reading
- 3 Steps
  - 1) Student's Oral Reading
  - 2) Adult Reader
  - 3) Text Reader
- How did the student like?
- Help with adding in AT for reading solutions



Rewordify.com

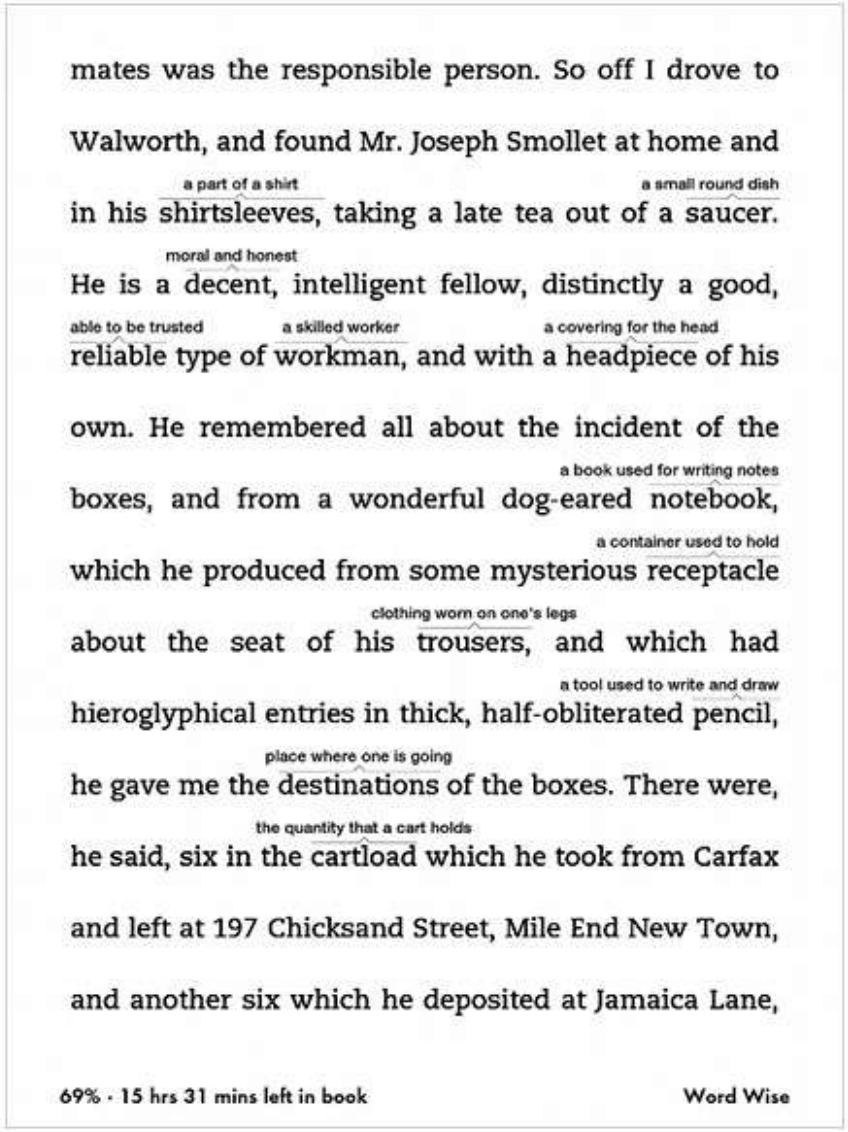
"Rewordify is a free website that makes English easier to read. In some ways it is similar to a thesaurus, but allows users to enter not just single words, but entire sentences, pages, and even websites, for clarification. Passages are preferred, as difficult words are 'rewordified' using the context of the sentence. For example, paste in "The tempest raged outside while the throng huddled inside.", and it is 'rewordified' into, "the storm raged outside while the crowd huddled inside."

Students can use this tool to make passages more understandable. Simplified words are highlighted for quick comparison with the original word(s)."



Word Wise - Kindle

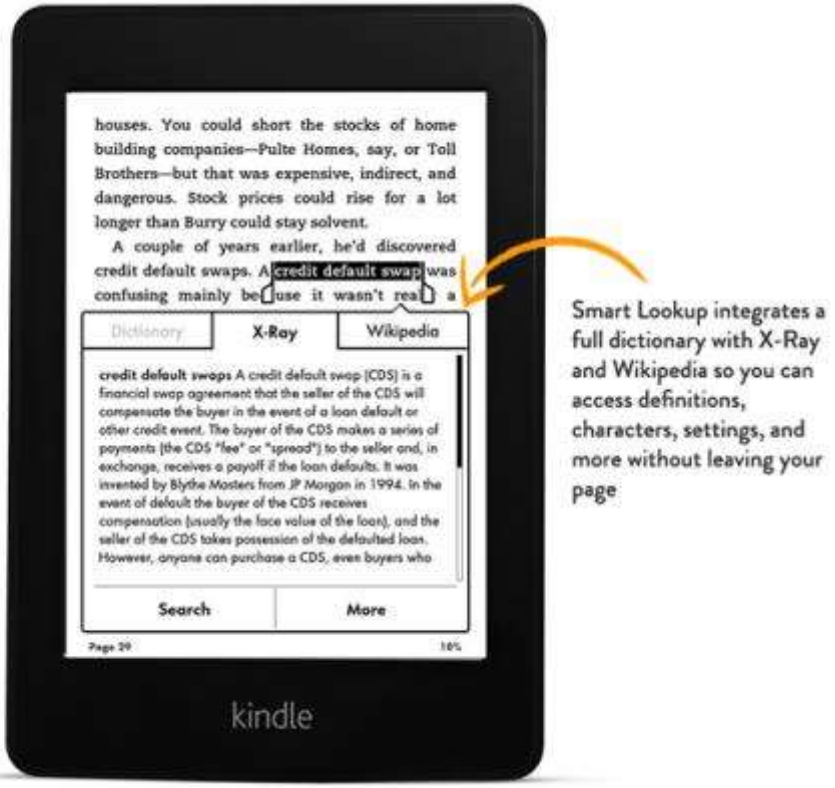
- Displays short definitions above difficult words while reading.
- Works with the Kindle Voyage, Kindle Paperwhite 2, and Kindle.
- Amazon lists 3,555 Word Wise enabled ebooks.
- You can download to test the feature if you want to see Word Wise in action.



X-Ray - Kindle

X-Ray is a reference tool incorporated in Amazon Kindle Touch and later models, the Kindle Fire tablets, the Kindle app for mobile platforms, Fire Phone and Fire TV.

X-Ray lets users explore in more depth the contents of a book, to "get to its bones". Users can touch a word to launch either a dictionary definition or a more in-depth explanation provided by Wikipedia or Shelfari.



BookSense

- Compact and portable DAISY reader
- Compatible with a wide rage of audio format
- Built-in text to speech engine to read a variety of documents
- Ability to record notes
- Listen to books and music on the go
- $299
- http://www.hims-inc.com/products/booksense/

Victor Reader Stream (new generation)

- Handheld media player by Humanware

- Plays DAISY books, MP3, MP4, EPUB
- Records voice and media
- Two built-in, human-sounding voices
- Built-in wireless networking capability
- $369

Reading Pens

- Scans text,
- Hear it spoken aloud
- Obtains definitions and correct pronunciation within seconds
- Variety of types
  - Wizcom
  - IRISPen
  - PenPower
  - Video Touch Pen by MoralRegion

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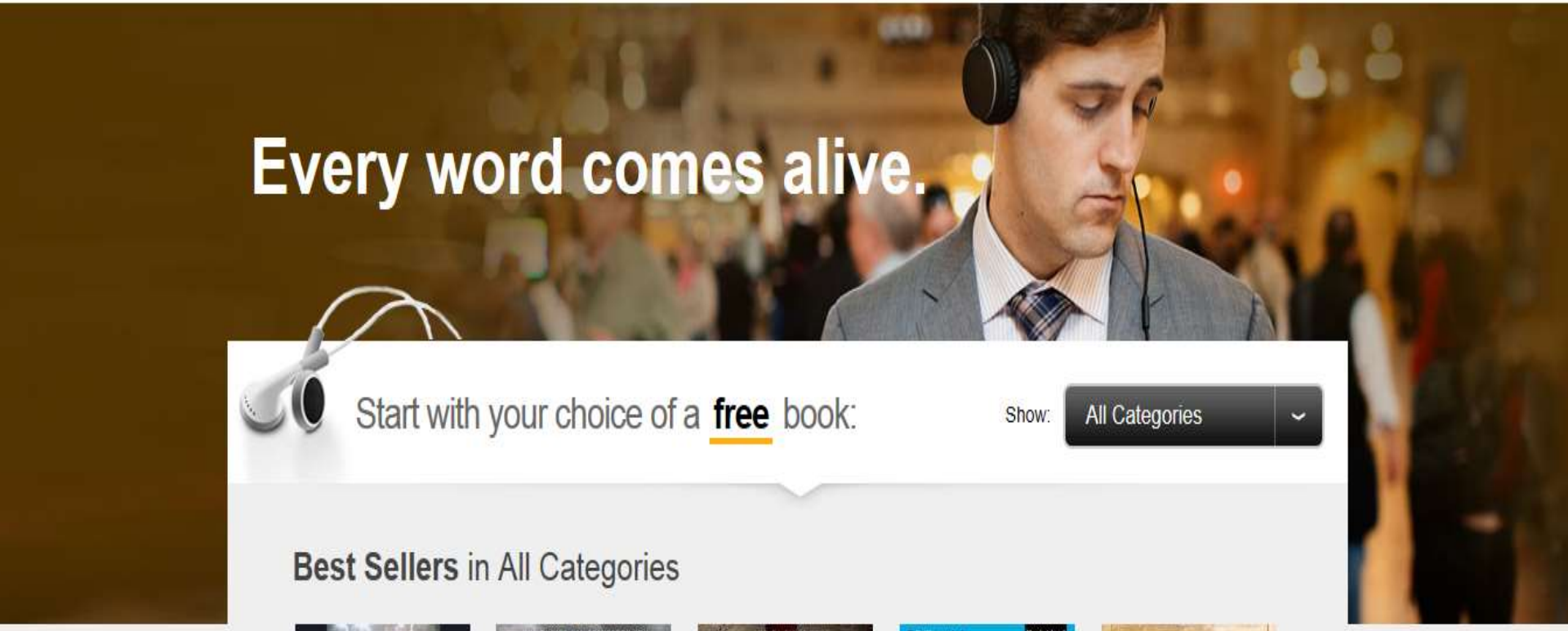
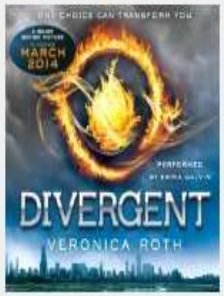


Start with your choice of a **free** book:

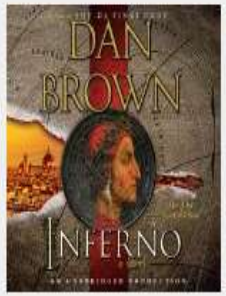
Show: All Categories

Best Sellers in All Categories

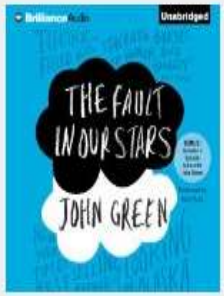
The Cuckoo's Calling



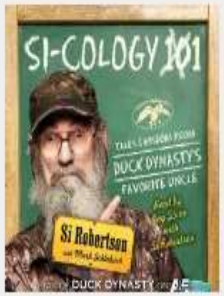
Divergent



Inferno: A Novel



The Fault in Our Stars



Si-cology 1: Tales and Wisdom from ...

Customer Favorites in All Categories

Types of Reading Apps

- There are over 27,000 reading apps and over 500,000 books and publications
- Active Reading Apps
  - Studies show that comprehension improves by 38%-70%
  - Defined as eyes are on the screen following the words
  - Highlighting of words, sentences, and paragraphs
- Passive Reading App
  - No pictures
  - Usually synthetic Computer Generated Voices/ VoiceOver

– *Therese Willkomm*

Mobile Tablets/ eReaders

- What do I need?
- Does it read out loud?
- Do I need Apps?
- Change colors?
- Change line spacing?
- Textbooks?
- Fun Reading?

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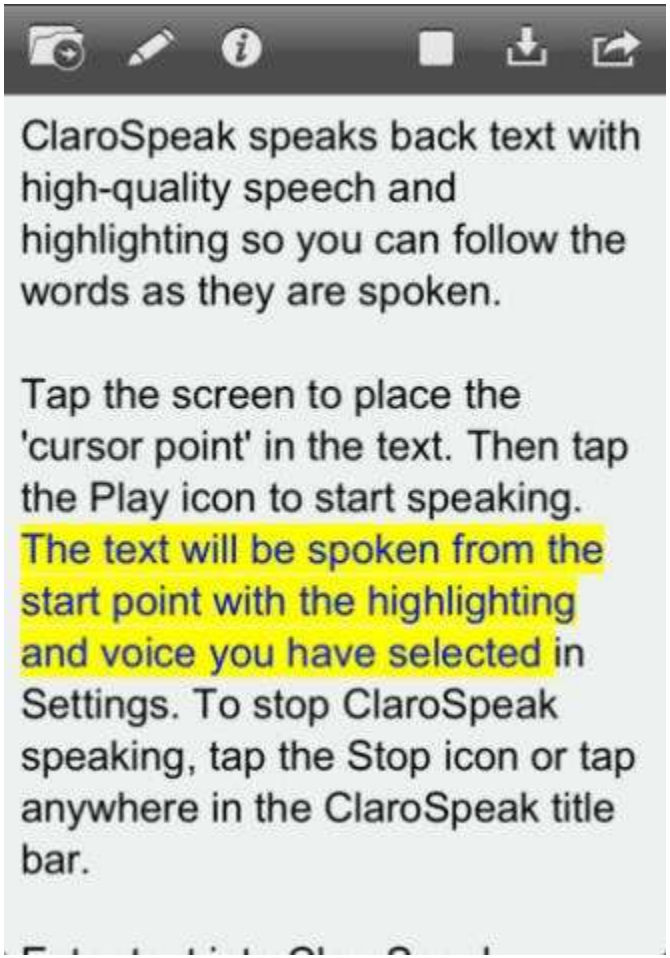
Reading Software

ClaroSpeak US



- Text-to-Speech
  - import documents and PDFs into ClaroSpeak from apps such as Mail, or import PDF, Word, Pages and other files directly from Dropbox using
- Change font and color
- Save text as an audio file
- Visual Tracking
- Send Text

ClaroRead

- Reads text as it highlights
- Moveable tool bar
- Can read doc, PDFs, internet, and more
- 6.2 version
  - In Europe
  - Can save directly to I tunes
  - Create a video
- Can change highlighting colors
- www.claroread.com

Premier Software

- Read documents in standard file formats such as Microsoft Word, Rich Text, text file format, HTML, and PDF
- Converted to audio files for use on a CD or MP3 player
- Scan and read documents
- Look up a word or definition in the integrated dictionary
- Create study notes and much more!
- www.readingmadeeZ.com

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Reading & Writing Software Solutions

Kurzweil 3000

- Text-to-Speech software
- Helps improve reading speed and comprehension
- Note taking capabilities
  - Different color highlighters
- firefly
  - Access many features of Kurzweil through the internet
  - firefly demo
- Free download trial
  - www.kurzweiledu.com
  - Kurzweil 3000 Demo

Kurzweil
EDUCATIONAL SYSTEMS®

TextHelp

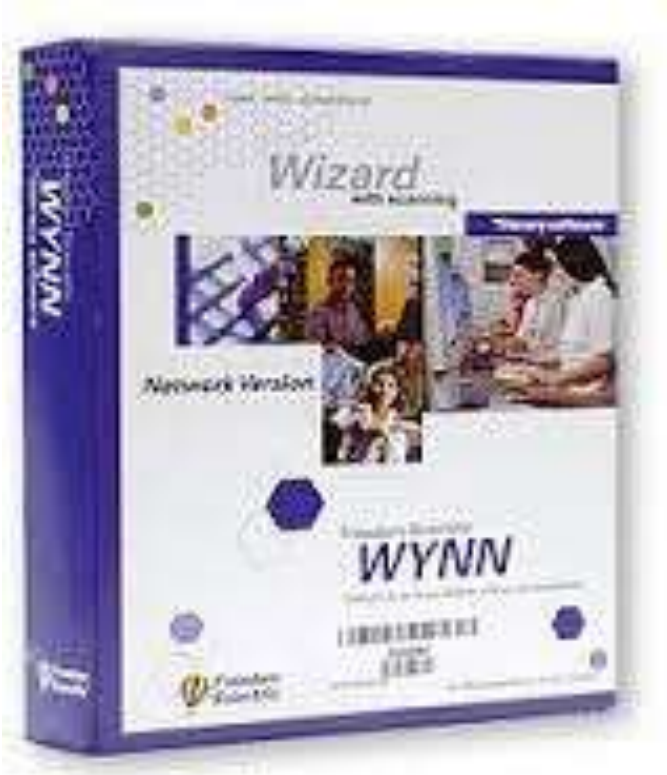
- Text-to- Speech software
- Helps improves reading skills
- Built in text and picture dictionaries
- Study skills highlighter

- Has a Google Chrom version
- www.texthelp.com

WYNN

- What You Need Now
- Freedom Scientific
- Scanning and Reading software
- Highlights text as spoken
- Icon friendly
- Built in study tools

- Internet Features



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Which One???

Kindle Fire HD/HDX

- eBook Reader and mobile tablet
- Front facing camera
- Access to Amazon apps
- Free cloud storage for Amazon purchases
- Purchase Apps
- 7inch or 8.9 inch screen
- ‘Mayday’ button HDX
- Starts at $139- HD
- $199- HDX

Apple iPad/ mini iPad

- Multi- touch screen
- Millions of apps
- Surf web
- iTunes
- Videos
- Organization
- Accessibility
- Books
- Photos
- Speakers
- New iPad had 5.0 megapixel camera
- Starts at $499/$399 and mini $329

Built-in Accessibility Features

- VoiceOver
- Zoom
- Large Text
- Invert Colors
  - (white on black)
- Speak Selection
- Speak Auto Text
- Mono Audio
- Assistive Touch
- Guided Access
- Home-Click Speed
- Incoming Calls
- Braille Displays

VoiceOver

- Standard feature on iPhones, iPads, and iTouches
- World's first gesture-based screen reader
- DOES NOT WORK WITH ALL APPS
  - Does not work with many eBooks or textbooks
  - Works with built-in apps
- Built-in voices that speak 36 languages
- Adjustable speaking rate
- Echoes each character as you touch it when typing or can speak completed word instead.
- Speak Auto-text
- Has the rotor
- Works with all built-in applications

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Reader for Websites

- Read articles and web pages without distractions
- Clutter disappears
- Add link into Reading List and finish later

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Surface Pro 3

Microsoft
Surface

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Why Surface | Products | For Business | Where to Buy | Support

Surface Pro 3 | Power and performance | Best of a tablet | Windows, Office, and Apps | Great Pen experience | Buy now

Ready to switch? Trade up your MacBook Air for a Surface Pro 3 now.

See offer

	PORTABILITY	PROCESSING POWER	MULTITASKING
Surface Pro 3	✓ Weighs a mere 2.4lbs and is only 0.55" thin with the keyboard[2] attached	✓ Choose from Intel® Core™ i3, i5, or i7 processors	✓ With Windows 8.1 Pro, you can snap up to 3 apps or desktop programs side by side to multitask with ease
13" MacBook Air	✗ Tips the scales at 2.96lbs and is 0.68" thick	✓ Available with Intel® Core™ i5 and i7 processor options	✗ OS X offers no support for snapping 2 apps side by side, but does allow you to multitask.

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SOME OF OUR FAVORITE APPS!

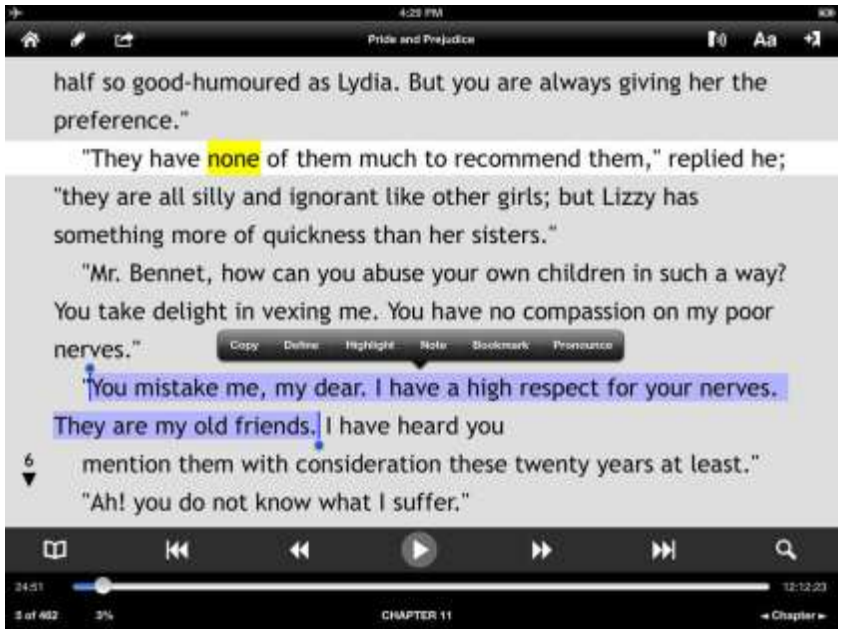
Learning Ally

- Learning Ally
  - DAISY
  - Membership required
  - over 75,000 audiobooks, audio textbooks, and other recorded books
  - Free Trial

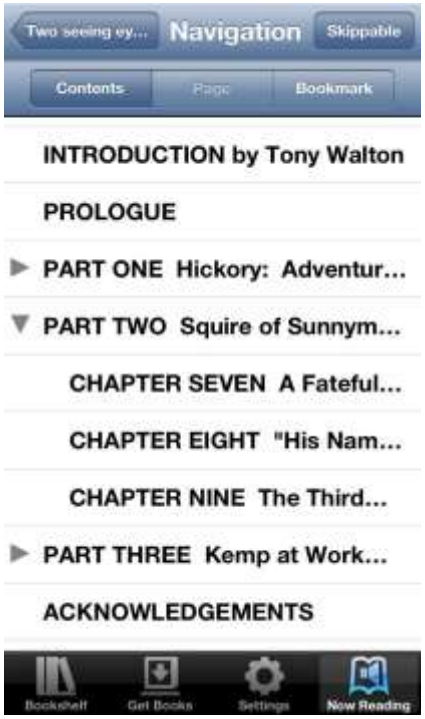
Voice Dream

- Text to Speech
- Highlights as it reads
- Import
  - Bookshare
  - Dropbox
  - Gutenburg
  - Word Doc
  - PDFs
- Buy different voices
- Change rate of speed

- Download for later reading
- $9.99



BARD Mobile



- Access directly to the National Library Service for the Blind and Physically Handicapped (NLS)
- Must be registered
- Settings
- Can use with braille display
- http://www.loc.gov/nls/find.html
- Free

MyMedSchedule

- Keep track of medication
- Reminders
- Refill Reminders
- Healthcare Provider Profiles
- Insurance Information
- Allergies
- Works across Platforms
- Free
- www.mymedschedule.com

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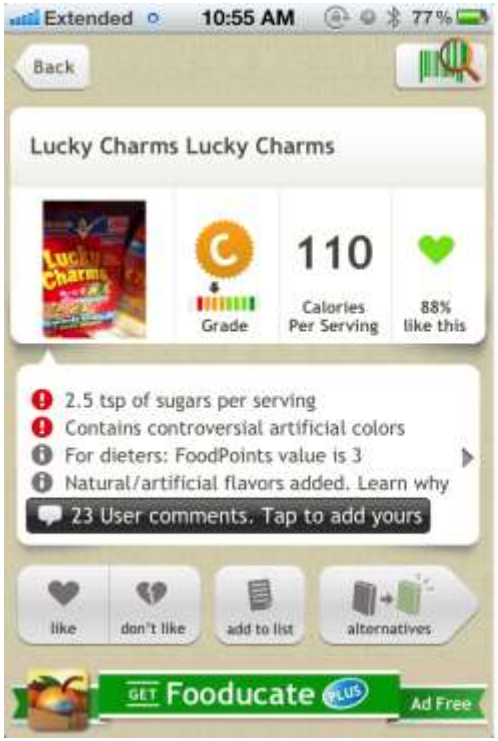
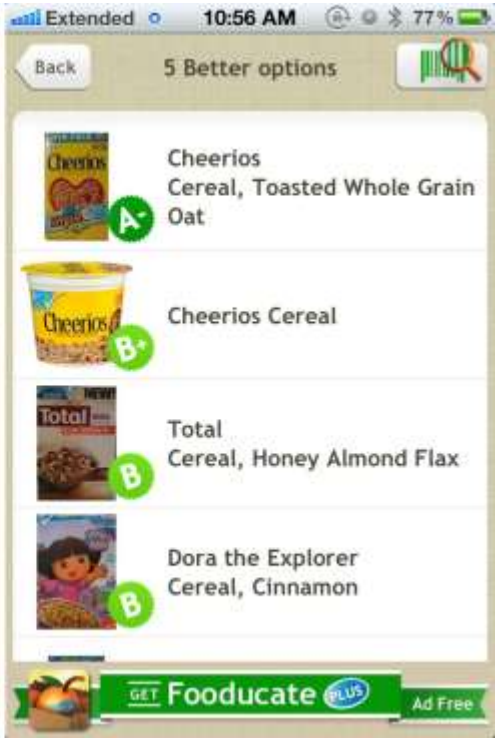
Fooducate

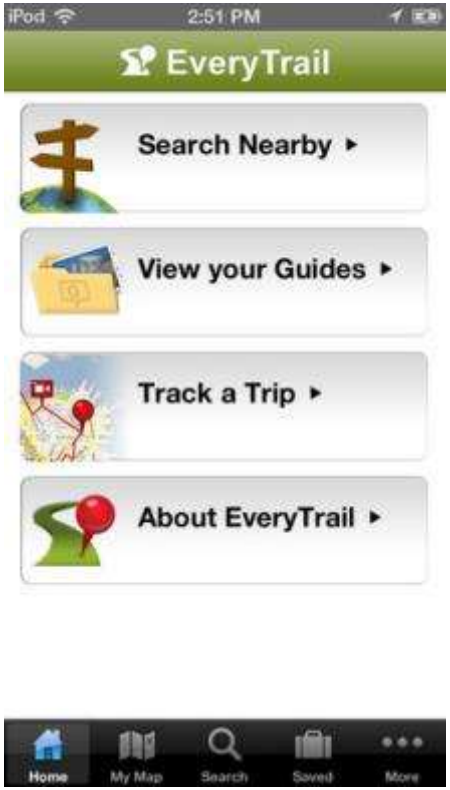
- Track calories
- Provides healthier options
- Educates on food ingredients
- Save favorites
- Create lists
- App for allergies and gluten-free
- App for diabetes nutrition
- Free
- www.fooducate.com

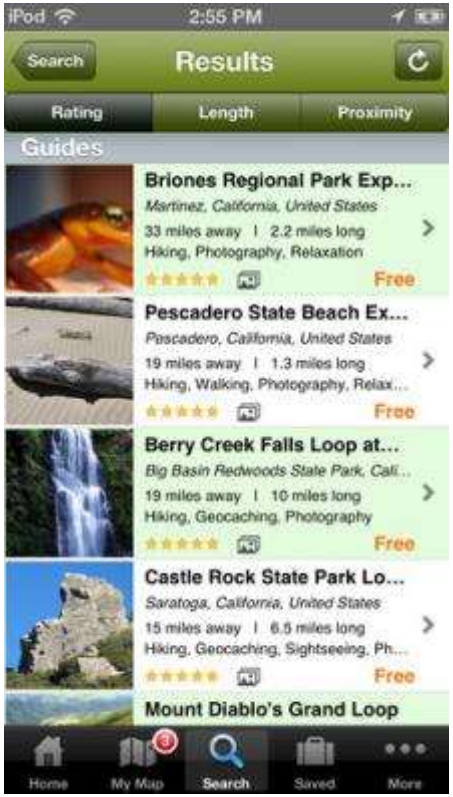




EveryTrail

- Tracks route using your iPhone GPS
- Use with walking tours, biking, running, hiking, sailing and driving
- Travel map is visible and drawn while trip is in progress
- Plot camera photos and video on map instantly
- View stats (distance, speed, elevation and more) while tracking
- View topography and terrain maps on iPhone
- Download maps for offline viewing
- Free





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USA Today

- Current Events in order
- Breaking News Alerts
- Videos
- Photos and Text
- Pick Favorite Interests
- Free

SkyGrid

- Personalize news events by categories
- Simple interface
- Free
- www.skygrid.com

What's New In AT and the AT Community:

- Perhaps, Where We Are Going

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Science News

... from universities, journals, and other research organizations

E-Readers Can Make Reading Easier for Those With Dyslexia

Sep. 18, 2013 — As e-readers grow in popularity as convenient alternatives to traditional books, researchers at the Smithsonian have found that convenience may not be their only benefit. The team discovered that when e-readers are set up to display only a few words per line, some people with dyslexia can read more easily, quickly and with greater comprehension. Their findings are published in the Sept. 18 issue of the journal *PLOS ONE*.

In the paper condition students read passages from the Gates-MacGinitie Reading Tests and answered multiple choice questions as shown. In the iPod condition the reading passage was displayed on the iPod (scrolled vertically using a finger on the

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An element in many cases of dyslexia is called a visual attention deficit. It is marked by an inability to concentrate on letters within words or words within lines of text. Another element is known as visual crowding--the failure to recognize

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read Sc
Just In:
Triclosar
Social
Follow S
and Goo
Face
Recomm
and Goo
Like
Other so

HEALTH

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MIT Finger Device Reads to the Blind in Real Time

In this Thursday, June 26, 2014 photo, a model wears a FingerReader ring at the Massachusetts Institute of Technology's Media Lab in Cambridge, Mass. Researchers designed and developed the instrument, which enables people with visual disabilities to read text printed on paper or electronic devices. (AP Photo/Stephan Savoia) AP

By RODRIQUE NGOWI
Associated Press

JULY 8, 2014 1:24 AM

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See for Yourself

What is OrCam?

OrCam is an intuitive portable device with a smart camera designed to assist people who are visually impaired.

OrCam gives independence.

Other Resources

Atomic Learning Tutorials

AMAC membership also provides you with access to Atomic Learning videos. Click on the **Support** Tab in the Student Download Center and click on **Atomic Learning** to access video tutorials on many widely used applications and devices such as Microsoft Office and iOS for iPad and iPhone.

Additional Resources

Family Center on Technology and Disability
http://www.fctd.info

WrightsLaw
http://www.wrightslaw.com

National Disability Rights Network
http://www.napas.org/

A Guide to Disability Rights Law – U.S. Department of Justice
http://www.usdoj.gov/crt/ada/cguide.htm

American Association of People with Disabilities
http://www.aapd-dc.org/

Consortium for Citizens with Disabilities
http://www.c-c-d.org/

Many states have their own Disability Law or Protection and Advocacy Organizations. Links to these sites can be found on the Family Center on Technology and Disability's Website under Member Organizations.

AMAC
Accessibility for All

Our Question to You:
What have You Learned today?

TOOLS for LIFE
Georgia's Assistive Technology Act Program