

Assistive Technology to Support Academic Success

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Tools for Life | Center for Inclusive Design and Innovation |
College of Design | Georgia Tech

CREATING THE NEXT®

The Case Against Assistive Technology



[Watch Here – “The Case Against Assistive Technology” on YouTube](#)



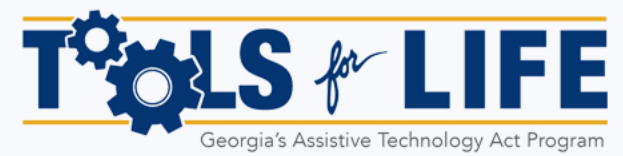
Assistive Technology

What is Assistive Technology?

- Assistive Technology (AT) is any item or piece of equipment that is used to increase, maintain or improve the functional capabilities of individuals with disabilities in all aspects of life, including at school, at work, at home and in the community.
- Assistive Technology ranges from no/low/light tech to high tech devices and equipment.



Definition of Assistive Technology Service (1)

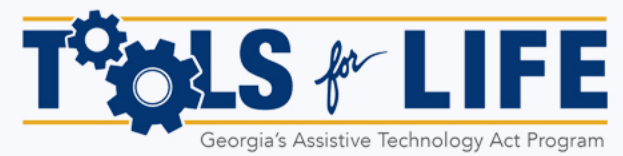


§ Section 300.6 Assistive technology service.

Any service that directly assists a child with a disability with the selection, acquisition, or use of an assistive technology device. The term includes-

- (a) The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;
- (b) Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;

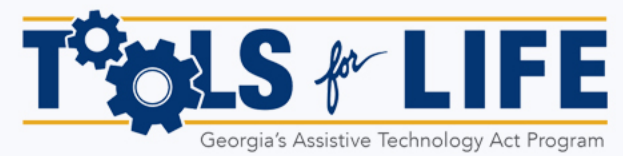
Definition of Assistive Technology Service (2)



§ Section 300.8 (Continued)

- (c) Selecting designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing assistive technology devices;
- (d) Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;

Definition of Assistive Technology Service (3)



§ Section 300.8 (Continued)

- (e) Training or technical assistance for a child with a disability or, if appropriate, that child's family; and
- (f) Training or technical assistance for professionals (including individuals or rehabilitation services), employers, or other individuals who provide services to employ, or are otherwise substantially involved in the major life functions of children with disabilities.

(Authority 20 U.S.C. 1401(2))

Common AT Categories

- Aids for Daily Living (ADL)
- Environmental Controls (EC)
- Mobility
- Communication Aids
(Augmentative and Alternative Communication (AAC))
- Computer Access and Instruction
- Blindness and Visual Impairment (VI) / Visual Aids
- Deafness and Hearing Impairment (HI)/ Hearing and Listening Aids
- Academic and Learning Aids
- Cognition and Learning Disabilities
- Instructional Aids
- Pre-Vocational and Vocational Aids
- Recreation and Leisure / Gaming /Art
- Adaptive Toys and Games
- Ergonomic



Determining Assistive Technology

SETT Framework and Feature Matching

SETT Framework (1)

The SETT Framework...

a flexible tool that makes concerns, identifications and solution-seeking processes accessible to all and is useful in phases of decision-making and service delivery.

– Joy Zabala

joy@joyzabala.com

SETT Framework (2)

Student

Environments

Tasks

Tools

SETT Framework (3)

The Student/Self

- The person who is the central focus of the process.
- The person for whom everyone involved in any part of the program is an advocate.

– Joy Zabala

joy@joyzabala.com

Environments

The customary environments in which the person is (or can be) expected to live, learn, and grow.

– Joy Zabala

joy@joyzabala.com

SETT Framework (5)

Tasks

The specific things that the person needs or wants to be able to do to reach expectations.

– Joy Zabala

joy@joyzabala.com

The Tools

Everything that is needed by the person and others for the person to accomplish the tasks in the places where they need to be done so that progress is achieved.

– Joy Zabala

joy@joyzabala.com

SETT Framework (7)

SETT Scaffold for Consideration of AT Needs

Name:	Date of birth:	Current Date:
Contact or Location:		
Persons participating in consideration:		

1. Review each area below and mark to indicate any areas in which there are concerns about the ability to function as independently as possible in that area because of disabilities. Review the goals and objectives of the service plan to determine if any functional limitations will impede progress.

Physical: (health, motor abilities, seating, positioning) Sensory: (Vision, hearing, sensitivity to/of touch)	Academic Performance: Basic and content reading, Reading comprehension, Mathematics calculation, reasoning and application, Written expression, Oral expression, Listening comprehension, Learning preference, learning style, strategies, Effect of the disability on acquisition, development, mastery and applications of academic skills. Environmental Control: Ability to control events within the environment, Ability to interact with others to influence actions of others	Vocational Performance: General work behaviors, Following directions, Working independently or with job supports, Job preferences or interests, Dexterity, Abilities, Interpersonal relationships and socialization, Related work skills. Recreation / Leisure: Free time, maintenance of physical fitness, use of generic community recreation facilities and resources and degree of social involvement.
Communication: Speech sound production and use, receptive and expressive language, voice, fluency, augmentative and alternative communication Cognitive: An appraisal of aptitude and mental processes by which an individual applies knowledge, thinks and solves problems.	Social Competence: Adaptive behaviors and social skills, which enable a child or youth to meet environmental demands and to assume responsibility for his own and other's welfare.	Other:

2. If there are no areas of concern, proceed to Step. #9.
3. Enter each highlighted area into a box in the first column of the grid below, along with the specific functions that are of concern (see table above for examples)
4. If there are areas of concern, write the SPECIFIC tasks related to progress in that area that this person needs to be able to do or learn to do that currently would be difficult or impossible to do without assistance.
5. For each task listed, determine how barriers to doing those tasks are currently addressed (special strategies? Accommodations? Modifications? Assistive technology?). Enter this information in Column A.
6. Determine if there are any continuing barriers encountered when attempting a task? If yes, complete Column B.
7. Consider whether the use of new or additional assistive technology would: (a) enable performance of this task with more ease, efficiency, or in a less restrictive environment, or (b) perform the task successfully with less personal assistance. If yes, indicate in column C.
8. If team members are not familiar with assistive technology tools that could address remaining barriers or need additional assistance, indicate in column C that further investigation is necessary in this area.
9. Analyze the information that has been entered in the previous steps, then complete the Summary of Consideration to reflect the results of the analysis.

[http://www.joyzabala.com/uploads/Zabala SETT Scaffold Consideration.pdf](http://www.joyzabala.com/uploads/Zabala_SETT_Scaffold_Consideration.pdf)

SETT Framework (8)

The image shows a computer screen with two windows open. The left window is a Google Slides presentation titled 'SETT Framework'. The slide has a black header with the title 'SETT Framework' in yellow and the 'TOOLS for LIFE' logo. Below the header is a large blue rectangular box. The right window is an Adobe Acrobat Pro DC document titled 'Zabala SETT Scaffold Consideration.pdf'. The document is a PDF form with sections for 'Assess in which non-typical conditions are currently of concern', 'Consider functioning in all customary environments', and a 'SUMMARY OF THE CONSIDERATION' section. The 'SUMMARY OF THE CONSIDERATION' section includes a table for 'Decisions' and a table for 'Tools with a variety'.

SETT Framework

TOOLS for LIFE
Georgia's Assistive Technology Act Program

Assess in which non-typical conditions are currently of concern
(Enter only one on each line. Use additional lines for more areas of concern.)

Consider functioning in all customary environments.

SUMMARY OF THE CONSIDERATION of possible need for assistive technology services. If the team has determined that a need exists, describe what will be provided (more specific assessment of need for assistive technology; existing tools, adaptation or modification of existing tools; additional tools, technical assistance on device operation or use, training of student, staff, or family, etc.).

Decisions	Summary of Consideration
	Needs are currently being met without assistive technology. It is anticipated that current goals can be worked toward without assistive technology devices or services. AT is not necessary at this time.
	It is anticipated that adequate progress cannot be made without the support of assistive technology. Assistive technology devices/services are required by this student and will be used for designated tasks in customary environments. (Specify nature and duration in the plan.)
	Further investigation - assessment is necessary to determine if or what assistive technology devices and services may be required.

Tool/AT devices and services to be provided. Include those currently used successfully, and those to be tried or added.	Responsible Parties	Initiation	Duration
Tools with a variety			

© Zabala, J.B. (2005). Assistive Technology Consideration Guide. Based on O'Brien, A. P., & Zabala, J. B. (1998). Assistive Technology Consideration Guide for IEP Teams. For more information or to provide feedback, contact J.B. at jzabala@toolsforlife.com.

Consideration of Assistive Technology



GPAT Resources

- GPAT AT Consideration Process Guide
- GPAT AT Consideration Resource Guide
- GPAT AT Consideration Resource Guide

[GPAT's Considering Assistive Technology for Students with Disabilities webpage](#)

GPAT AT Consideration Resource Guide

Useful Notes for Using this Resource Guide

Column A: Relates to basic instructional tasks which support the Common Core Georgia Performance Standards (CCGPS) and/or other tasks

Column B: Standard classroom materials available for student use (listed in alphabetical order)

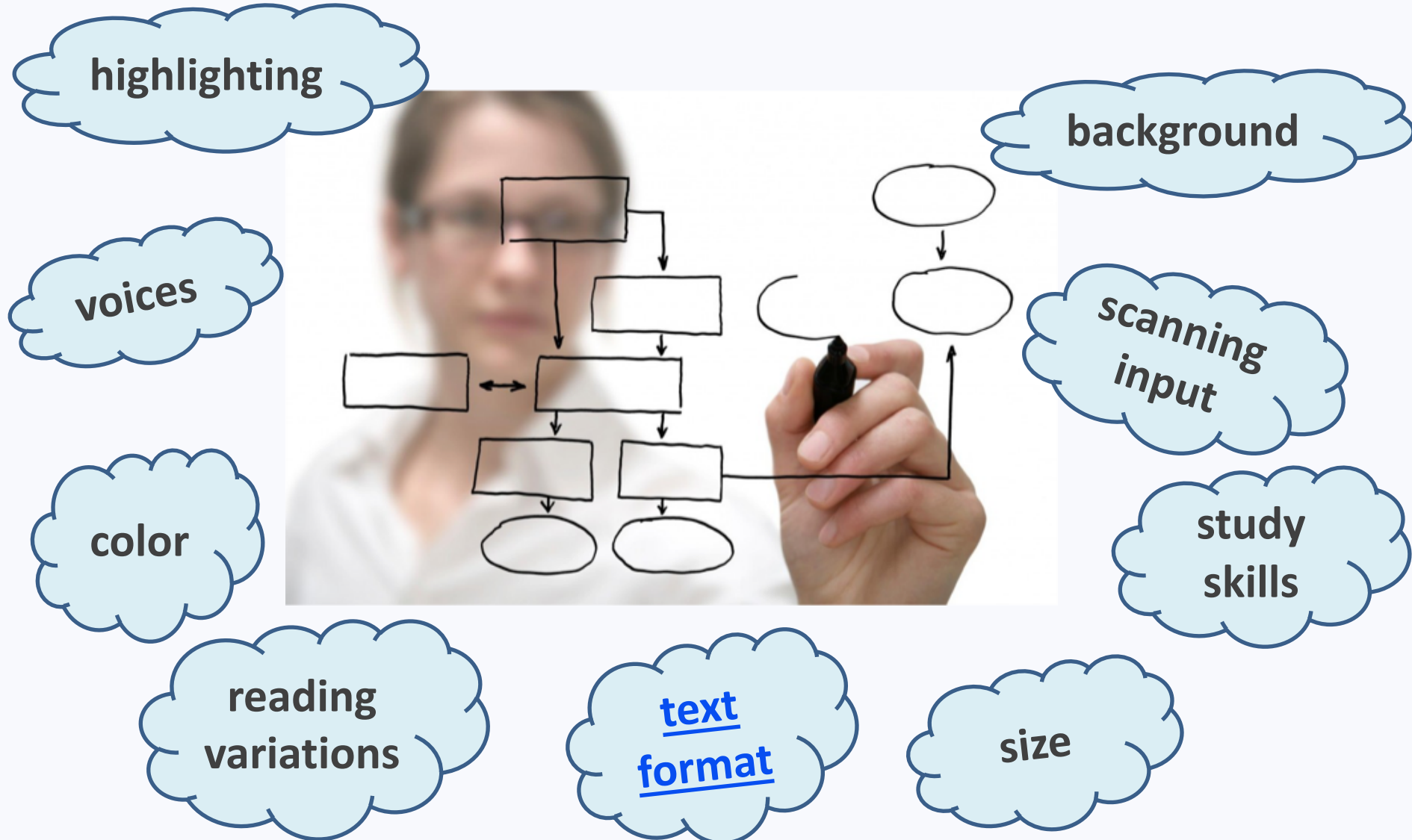
Column C: Accommodations, modifications and/or strategies (listed in alphabetical order)

Column D: Potential Assistive Technology solutions (corresponds to Columns D and E on the GPAT Consideration Process Guide)

A. Area and Sample Instructional Tasks	B. Standard Classroom Materials	C. Accommodations/Modifications/Strategies	D. Assistive Technology Solutions
Writing/Written Composition: <ul style="list-style-type: none">• Draw/illustrate• Write name• Copy information• Write letters/words/numbers• Align numbers and text• Write from dictation• Writes legibly• Complete written worksheets and/or tests• Outline/organize thoughts• Write sentences, paragraphs or narratives• Take notes• Graph• Use appropriate spelling.	<ul style="list-style-type: none">• Computer/tablet/word processor• Crayon/Marker• Dictionary, grammar and/or spell checker• Document camera• Interactive whiteboard• Letter and number strip• Paper/writing surface• Pen• Pencil	<ul style="list-style-type: none">• Change format or substitute alternatives for written assignments• Decrease assignment length• Decrease number of responses• Increase print size• Increase time• Optimal student seating<ul style="list-style-type: none">◦ appropriate lighting (not facing glare or in shadows)◦ away from extraneous noises◦ close proximity to the teacher (distance)◦ individualized visual	<ul style="list-style-type: none">• Pencil grip or other alternative writing aids• Adapted paper<ul style="list-style-type: none">◦ bold line◦ raised line◦ different spacing◦ colored◦ graph• Positioning Aids (slant board/clip board)• Non-slip material• Personal dry erase board• Slate and stylus• Timers• Device, software or app<ul style="list-style-type: none">◦ spell and grammar checker◦ outlining/ graphic organizers

This document was developed by the Georgia Project for Assistive Technology, a project of the Georgia Department of Education, Division for Special Education Services and Supports.

Feature Matching



Text-to-Speech Feature Matching



Feature Match Checklists



Reading Difficulties and Supports

Determining Appropriate Supports

To provide appropriate supports, we must determine the types of difficulties the student is experiencing.

Determining the Right Tool(s)

- Student abilities and needs
- Required tasks
- Available supports

Why is Reading Hard?

Sensory Impairments that limit access to text

- Vision
- Hearing

Physical Disabilities

- Unable to hold a book
- Unable to turn a page

Seeing or Understanding the text

- Dyslexia
- SLD Language: Reading and Spelling

Understanding the text due to a Learning Disability

Types of Reading Difficulties

Struggling readers often have difficulty in one or more of the following areas:

- Phonemic awareness
- Phonics
- Vocabulary
- Comprehension
- Fluency

Technology

- Both assistive technology and accessible instructional technology have proven to address more learning needs of students with reading disabilities

*National Center for Technology Innovations
October 2004*

Technology Support for Reading Remediation and/or Compensation

Remediation Components

- Research-based strategies
- Skill-based instruction
- Instructional technology

Assistive Technology

- Instructional material access
- Improves student achievement



The screenshot shows the Understood.org homepage. At the top left is the Understood logo with the tagline "for learning & attention issues". To the right are links for "About", "Take Action", "Sign Up or Sign In", and a search bar. Language options for "English" and "Español" are also present. Below the header is a horizontal menu with categories: "Learning & Attention Issues", "School & Learning", "Friends & Feelings", "You & Your Family", "Community & Events", and a blue "Your Parent Toolkit" button with a dropdown arrow. The main content area features four large icons with labels: "Through Your Child's Eyes" (eye icon), "Tech Finder" (magnifying glass icon), "Just for You" (star in a circle icon), and "Parenting Coach" (book icon). Below this is a "Getting started >" section with a "Reading Assist" button, a video thumbnail of a man pointing at a whiteboard, and three text-based links: "Video: An Overview of Different Kinds of Learning", "9 Surprising Facts About Learning and Attention", and "Do Boys Have Learning and Attention Issues More".

Understood
for learning & attention issues

English Español

About Take Action Sign Up or Sign In Search

Learning & Attention Issues School & Learning Friends & Feelings You & Your Family Community & Events Your Parent Toolkit

Through Your Child's Eyes Tech Finder Just for You Parenting Coach

Getting started >

Reading Assist

Video: An Overview of Different Kinds of Learning

9 Surprising Facts About Learning and Attention

Do Boys Have Learning and Attention Issues More

<https://www.understood.org/en/tools/through-your-childs-eyes>



Specialized Format

Specialized Format

Provides access to text in an optimal format

- Large Type Books
- Braille
- Audiobooks
- Electronic Books (eBooks)

How to Decide?

Don Johnston
Human Learning Tools

Products About Us Blog & Case Studies Webinars & Events Support

Jump to: Overview Features Testimonials Pricing FAQs Districts Resources

[Request a Quote](#) [Try Free / Buy](#)

Your Launching Pad for Their Flight

With reading, some students decode well enough to understand text, others understand better when listening to content read aloud. uPAR gives you data that shows the way each student learns best—and the specific level of text that can be understood by each student when listening (with a reading accommodation) compared to independent reading.

REPORTS
uPAR Assessment (continued)

Ryan Stanton
Completed Date: 2014-08-29

Grade	Level	Silent Read	Adult Read	Test Reader
1			32%	47%
2			75%	75%
3				
4				
5				
6				
7				
8				
9				
10				
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12				
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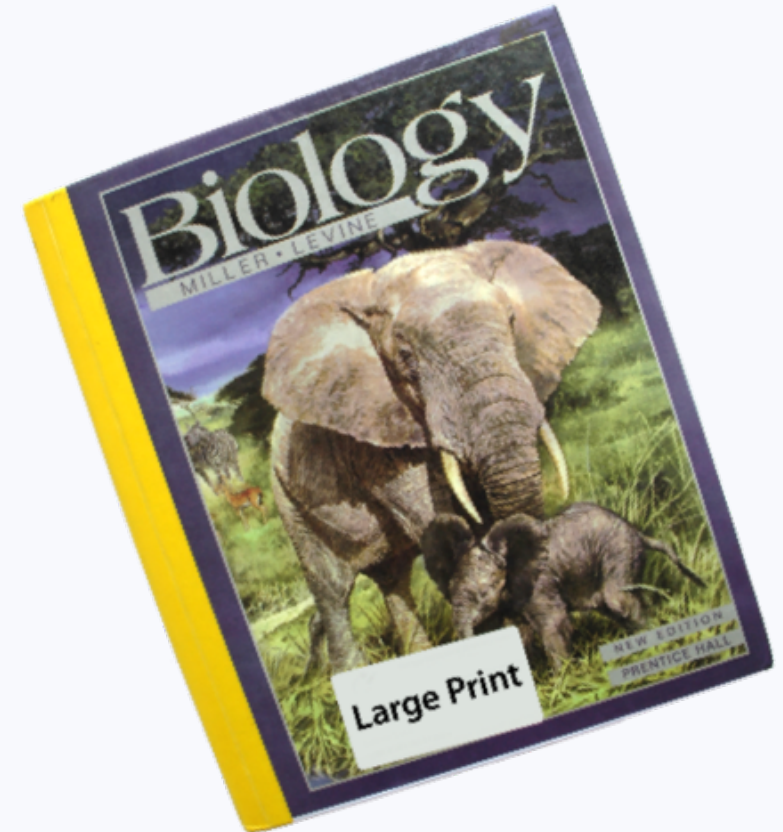
[uPAR](#)

Specialized Format

Large Print and Braille

Provides access to text in a format for visually impaired and blind

- Large Print Books
- Braille



The Difference between Audiobooks and Text-to-Speech

	Audiobook	Text-to-Speech (TTS)
What it is	An audio recording of a book being read aloud	A technology that speaks aloud digital text, such as books, news articles, magazine articles and websites, on a computer or mobile device
Type of reading voice	Human voice	Computer-generated voice
How the voice sounds	<p>Audiobooks are usually read aloud by actors. Because a person reads the text, audiobook readings tend to include things like:</p> <ul style="list-style-type: none">• Changes in tone and emotion.• Pauses in the reading at natural places, like at the end of sentences.	<p>There are many different TTS voices. As technology improves, the voices sound more and more natural. But since TTS is a digital voice and not a human voice, the reading may have:</p> <ul style="list-style-type: none">• Words pronounced wrong.• Pauses in places that don't make sense.• Words read in a tone or with an emotion that doesn't make sense.



<https://www.understood.org/en/school-learning/assistive-technology/assistive-technologies-basics/the-difference-between-audiobooks-and-text-to-speech>

Allow student to listen to audio files

- Free Audio Stories
- Teacher made files with digital recorder
- Computer generated files where creation can be with inexpensive or purchased software
 - TextAloud 4

Specialized Format

Audio Files (continued)

Devices used to listen to digital audio files

- Computer Software
 - Windows Media Player
 - QuickTime
- MP3 Players

Specialized Format

Audio Files (Book Services)

Provide access to texts in audio format such as CD or digital file

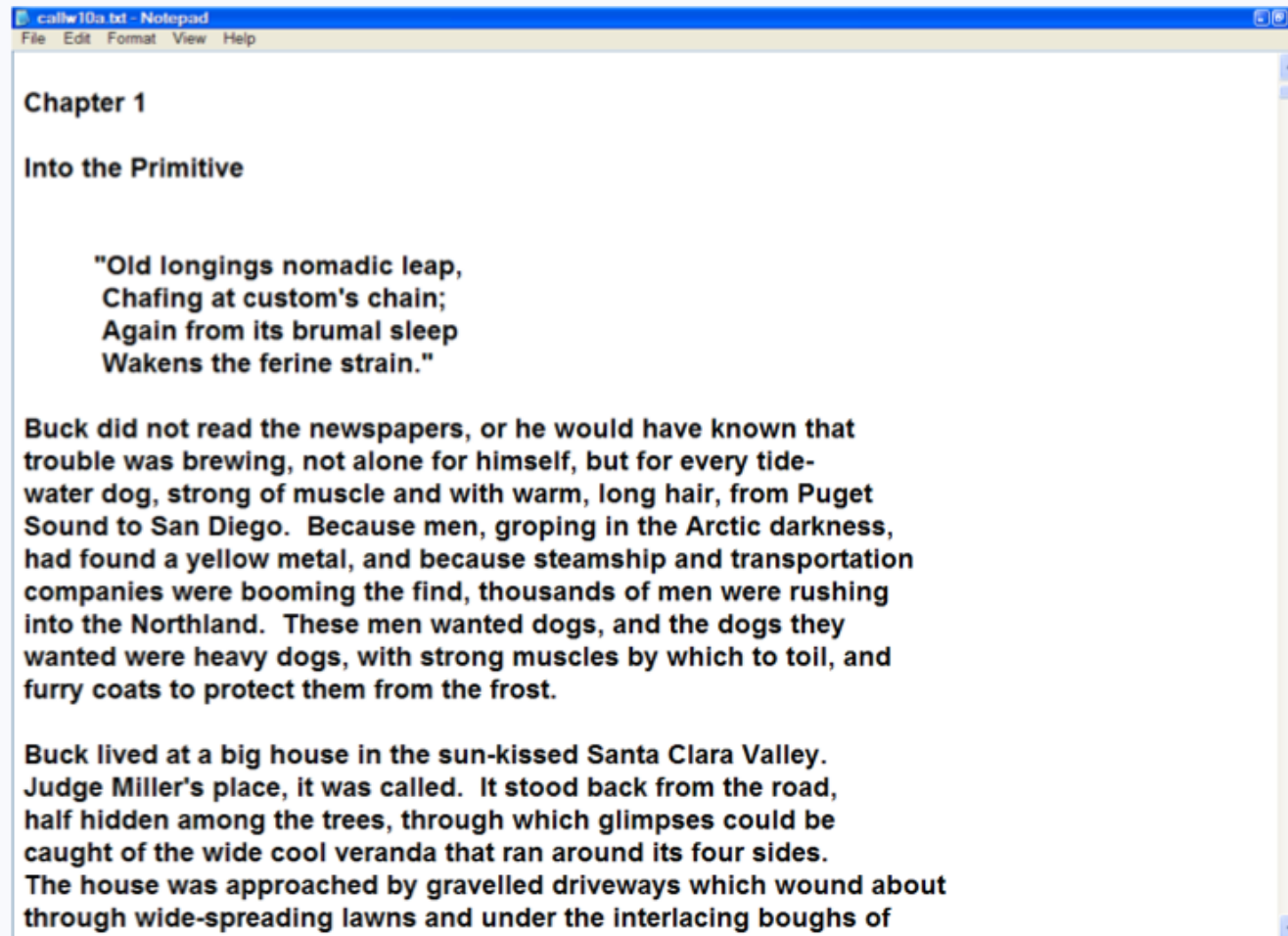
- Use requires eligibility with membership
 - Learning Ally
 - National Library Service



Specialized Format

Electronic books (eBooks)

Material is presented in primarily visual format



Specialized Format

Electronic books (eBooks), continued

Devices used to read electronic books

- Some may have text-to-speech, book-marking, and annotation features, and the ability to make visual adjustment

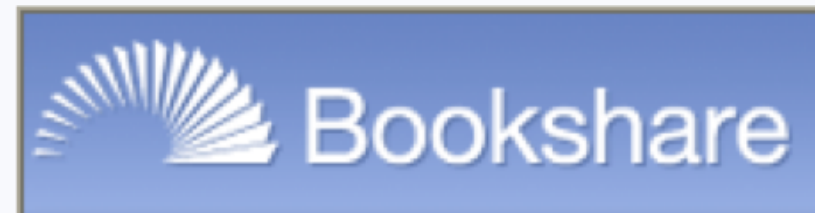


Specialized Format

Electronic Books (eBooks) Services

Material is presented in primarily visual format

- Available free, with subscription/membership and commercially
 - Project Gutenberg
 - Bookshare
 - Commercial resources such as Amazon





Examples of Frequently Used Tools

Positioning Aids

Allow for optimal positioning of text

- Book Stand
- PortaBook Stand
- Slant Boards



Tracking and Contrast Aids

Students needing tracking or contrast aids may display symptoms such as:

- Rubbing eyes
- Complain about eyes hurting or headache
- Difficulties with tracking
- Not wanting to read aloud
- Fidgeting and acting out
- Reading book under desk

Tracking and Contrast Aids, continued

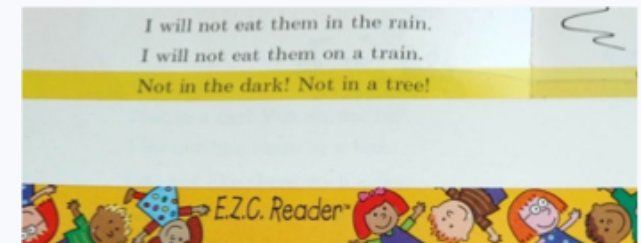
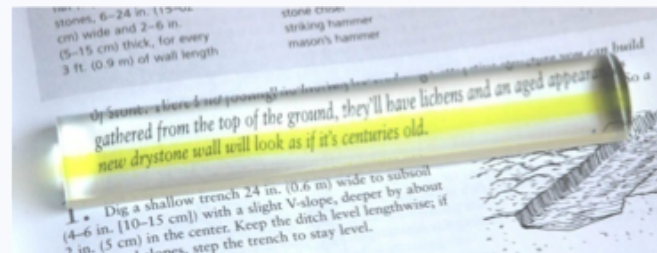
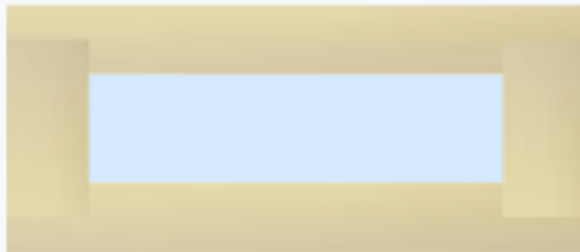
Websites addressing visual dyslexia

- [DyslexiaCure.com](https://dyslexiacure.com) under the National Reading Styles Institute
- [Irlen Institute](https://irlen.org)

Tracking Aids

Enable students with visual tracking difficulties to maintain their place in the text

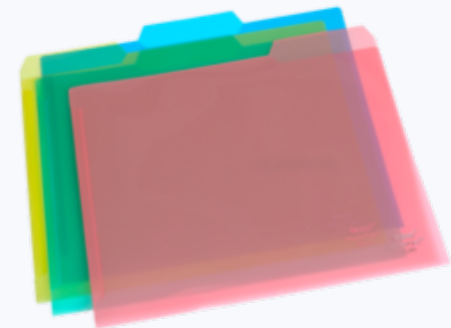
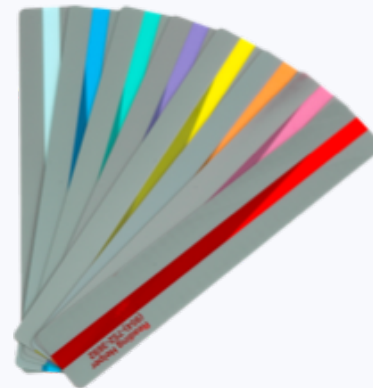
- Reading Window
- Bar Magnifier
- EZC Reader/Colored Reading Helper



Contrast Aids

Alter the foreground-background contrast to promote visual access to text

- Highlighters
- Highlighting Tape
- Reading Helpers
- Color Overlays
- Transparent Acetate Folders



Color Contrast Examples

Most textbooks are printed using black text on white paper. Some students experience difficulty reading the text with a white background. These students may need a contrast aid that will enable them to read the text more easily. Common

contrast aids include colored overlays/filters, highlighter tape, colored light bulbs, and customizing the background and text colors when using the computer for reading and writing tasks. Students who experience difficulty reading

assignments often find that using a contrasting background color helps them read the text more easily. While one student may benefit from having a yellow background, another may prefer reading with a light blue background.

Scanning Pen

Offers portable solution for reading difficult words and text in textbooks, worksheets and tests

- [C-Pen](#)

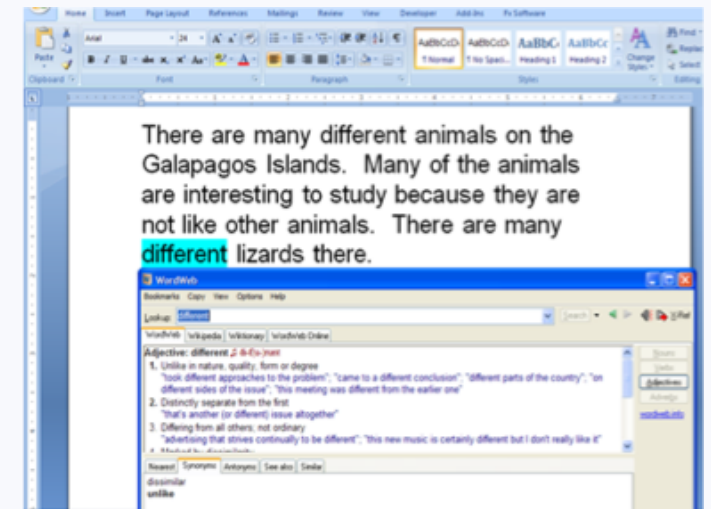
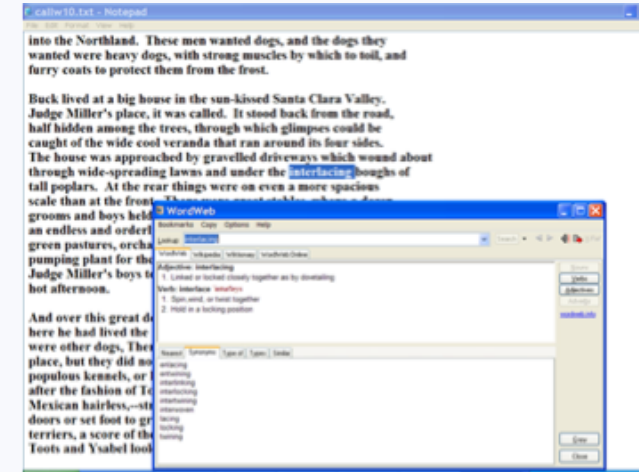




Computer-Based Reading Aids

Computer-Based Word Identification Aids

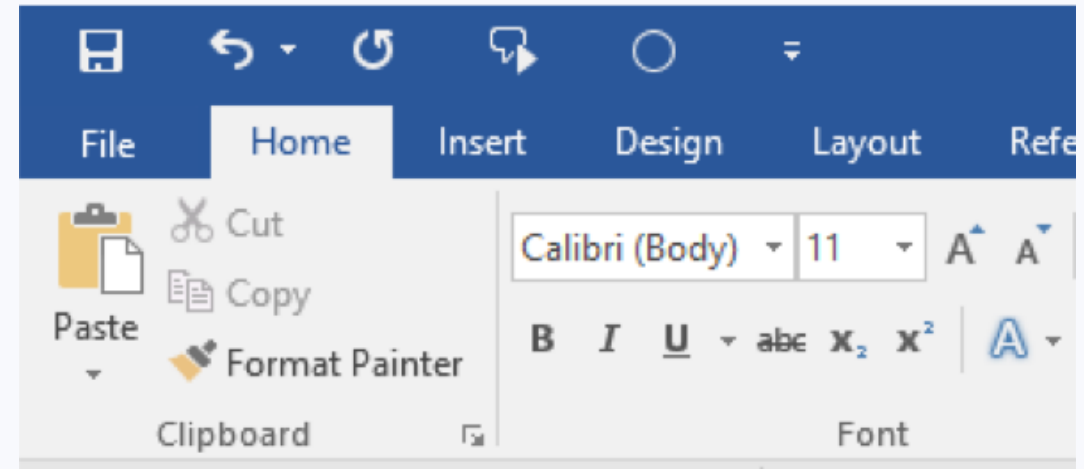
- Provides pronunciation, definition, synonyms
 - WordWeb Dictionary Thesaurus (WordWeb Software)
 - Control + right click on word in any program
- Online dictionaries
 - Completely web-based
 - Must have internet access to use



Standard Word Processing Software

Has built-in study features and allows students to enter, edit and store text

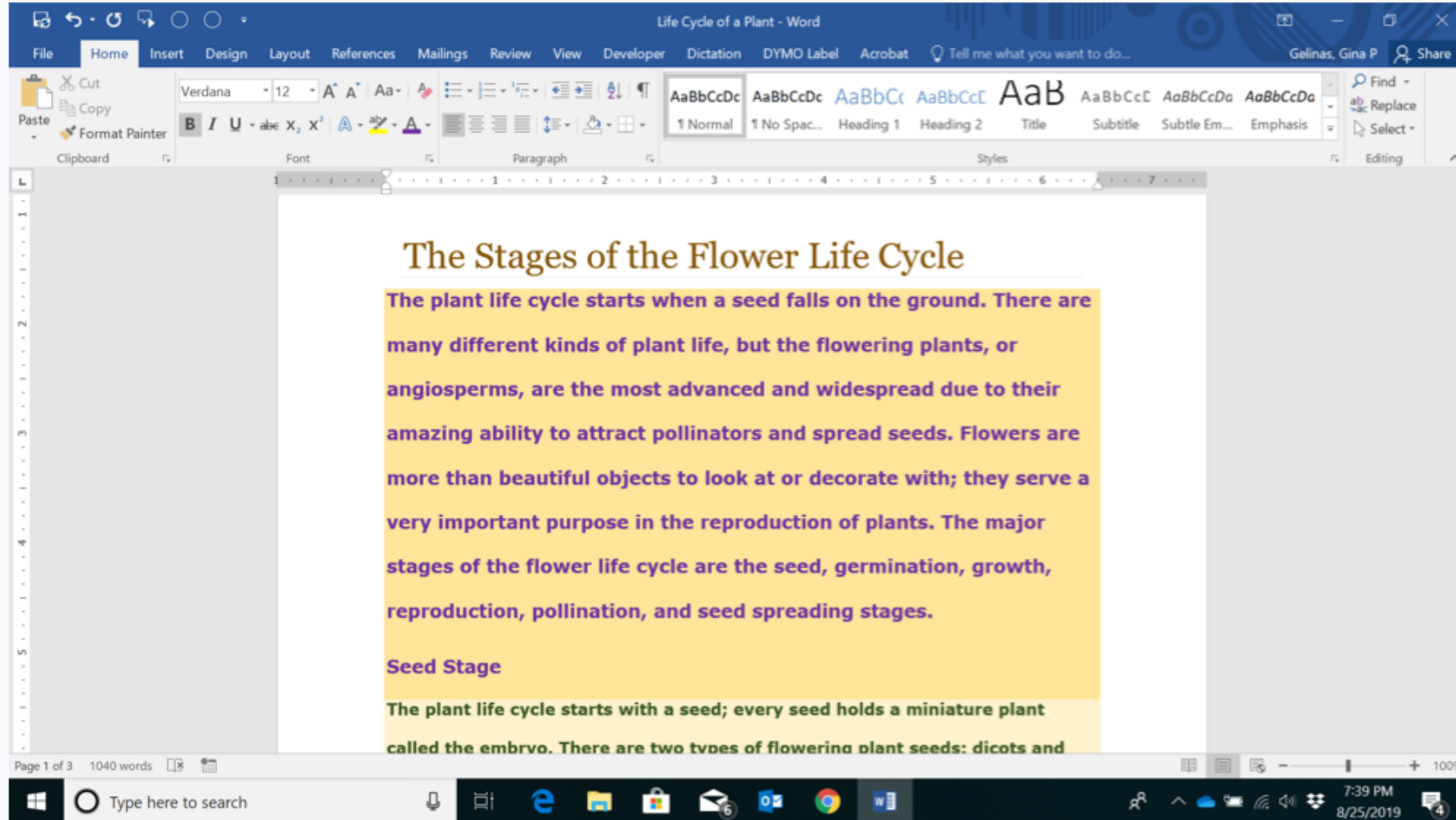
- Microsoft Word
 - Visual accommodations
 - Highlight text and colored fonts
 - Speak selected text
 - Dictation
 - Dictionary and thesaurus
 - Translate
 - Comment



Microsoft Word – TTS Dictation

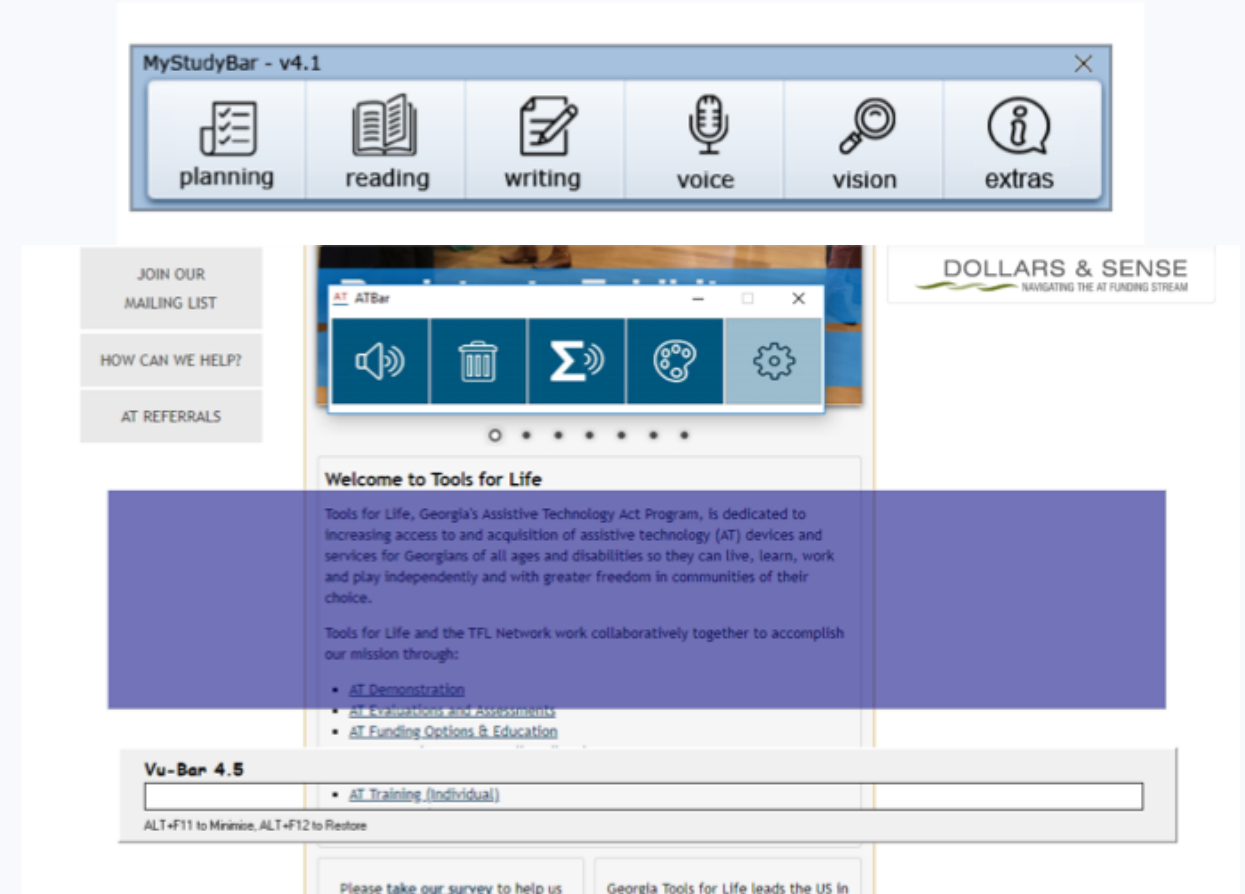
The screenshot displays the Microsoft Word application window titled "Life Cycle of a Plant - Word". The ribbon is set to the "Home" tab, with the "Dictation" group active. A "Response:" text box is visible above the "Start" button. The document content includes a blue hyperlink: <https://www.avasflowers.net/the-stages-of-the-flower-life-cycle>. Below the link is the section title "The Stages of the Flower Life Cycle" in a large, bold, brown font. The main text paragraph reads: "The plant life cycle starts when a seed falls on the ground. There are many different kinds of plant life, but the flowering plants, or angiosperms, are the most advanced and widespread due to their amazing ability to attract pollinators and spread seeds. Flowers are more than beautiful objects to look at or decorate with; they serve a very important purpose in the reproduction of plants. The major stages of the flower life cycle are the seed, germination, growth, reproduction, pollination, and seed spreading stages." This is followed by a sub-section titled "Seed Stage" in bold, with the text: "The plant life cycle starts with a seed; every seed holds a miniature plant called the embryo. There are two types of flowering plant seeds: dicots and monocots. An example of a dicot is a bean seed. It has two parts called cotyledons in addition to the embryo. The cotyledons store food for the plant. Cotyledons are also the first leaves that a plant has—they emerge from the ground during germination. Monocots have only one cotyledon—the corn seed is an example. Both kinds of seeds have the beginnings of a root system as well. The hard outside of the seed is called the seed coat." The status bar at the bottom indicates "Page 1 of 2" and "1040 words". The Windows taskbar at the very bottom shows the search bar and various application icons.

Microsoft Word – Visual



My Study Bar V4.1

- Set of portable freeware software
- Designed to run on PCs
 - Not available on Mac
- Each tab has different tools listed underneath



<https://www.eduapps.org/mystudybar/>

Microsoft OneNote

Programs that will display specially formatted text on the computer –
Microsoft OneNote – Digital Notebook with free Learning Tools Add-In

<http://onenote.com/learningtools>

The screenshot shows the Microsoft OneNote Learning Tools Customer Preview page. At the top, there's a navigation bar with the OneNote logo and a 'Feedback' link. Below this, a banner reads 'Learning Tools for OneNote' with sub-points: 'Increasing comprehension for every student', 'Students become independent readers', 'Teachers get more instructional time', and 'Get Started Now'. The main heading is 'Learning Tools for OneNote Customer Preview'. The text below states 'Making it easier to read and write' and describes how the Learning Tools help improve reading and writing skills for all students. A quote from Joel Reese, a teacher at Sammamish High School, is included. A prominent purple button says 'Download Learning Tools Add-In', with a link for 'Other download options' below it. On the right, a video player shows a preview of the Learning Tools interface with a play button and a 'Table of Contents' button. The video player controls at the bottom show a progress bar, a 'Table of Contents' button, a timestamp of 00:00 / 04:45, and a volume icon.

OneNote

Learning Tools for OneNote

Increasing comprehension for every student

Students become independent readers

Teachers get more instructional time

Get Started Now

Learning Tools for OneNote Customer Preview

Making it easier to read and write

The Learning Tools for OneNote help everyone improve their reading and writing skills, including gifted learners, students with learning differences or a combination of any of the broad range of unique student abilities.

"Students spend so much energy decoding that they can't focus on content. This tool will help making learning more efficient."

Joel Reese, teacher Sammamish High School

[Download Learning Tools Add-In](#)

[Other download options](#)

Learning Tools for OneNote

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00:00 / 04:45

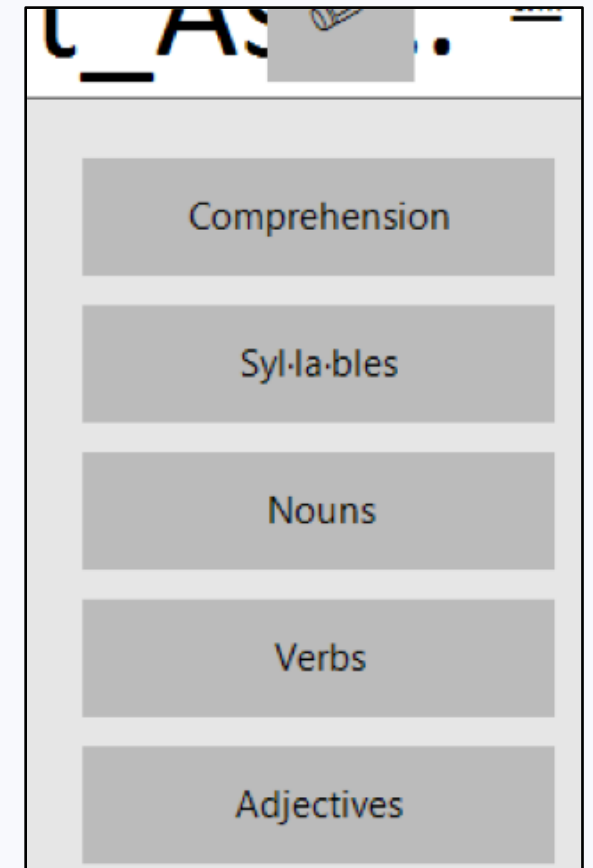
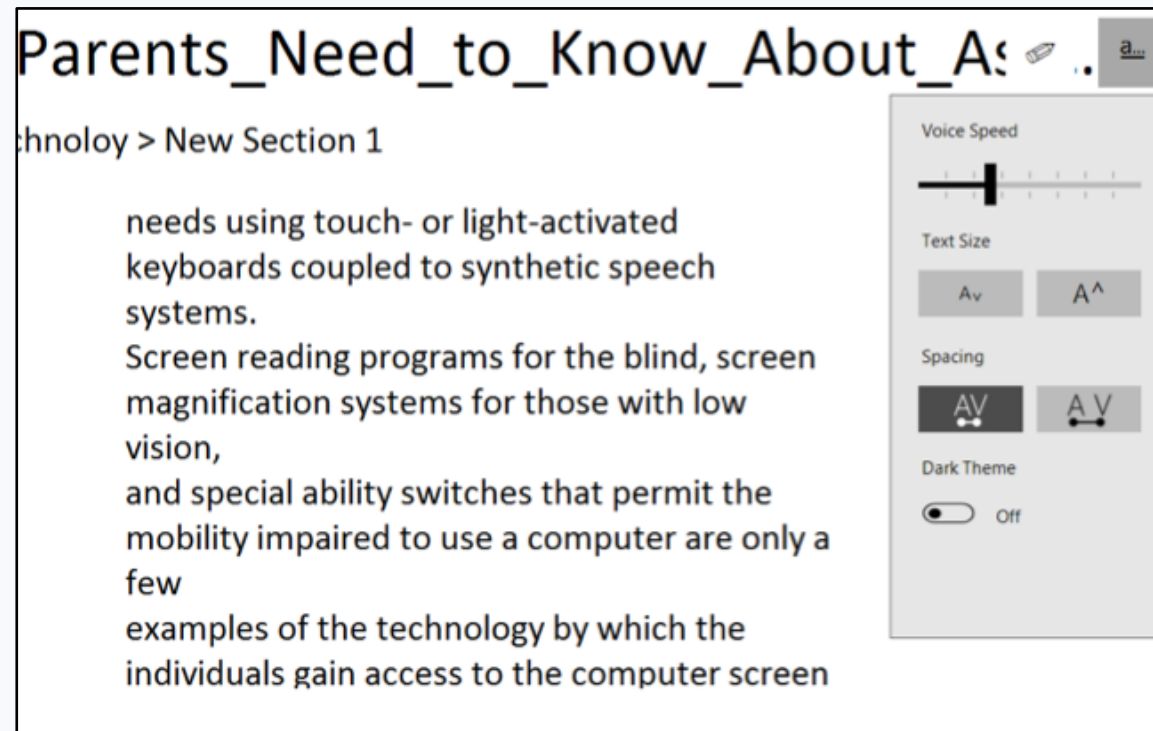
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Increasing comprehension for every student

OneNote – Learning Tools Add-In

Programs that will display specially formatted text on the computer –
Microsoft OneNote – Digital Notebook with free Learning Tools Add-In

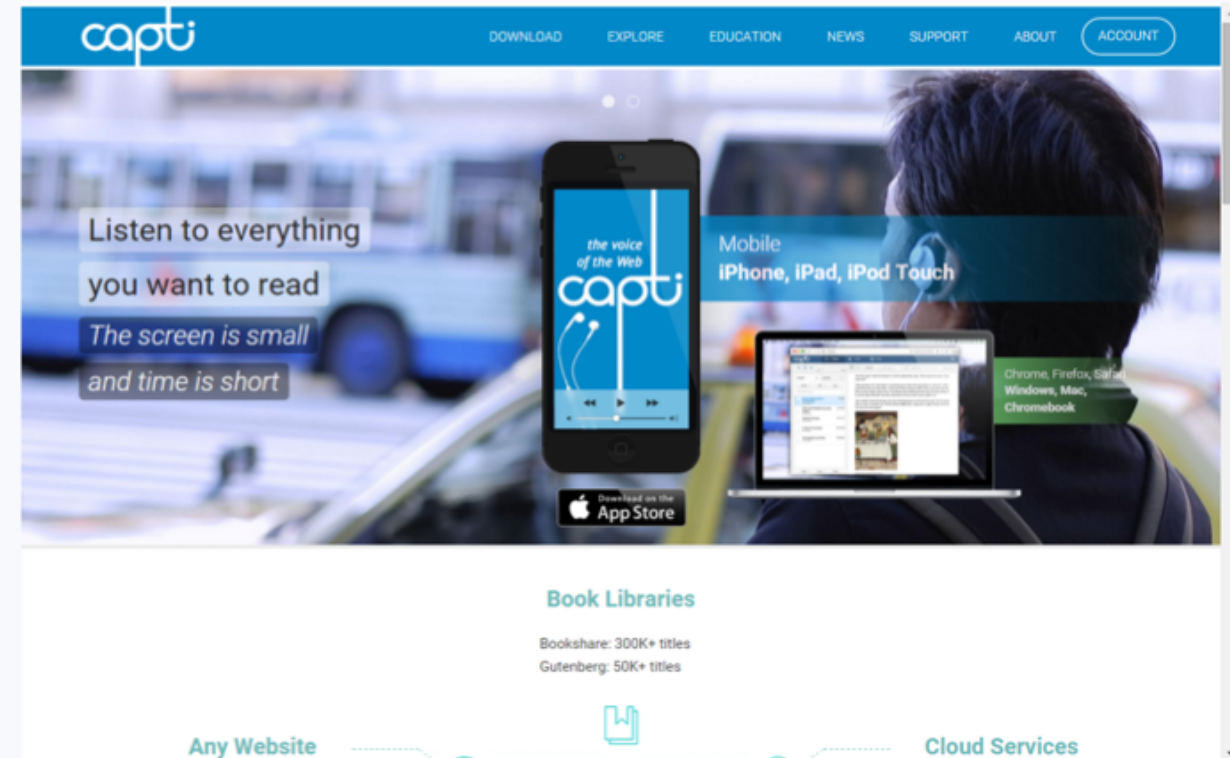
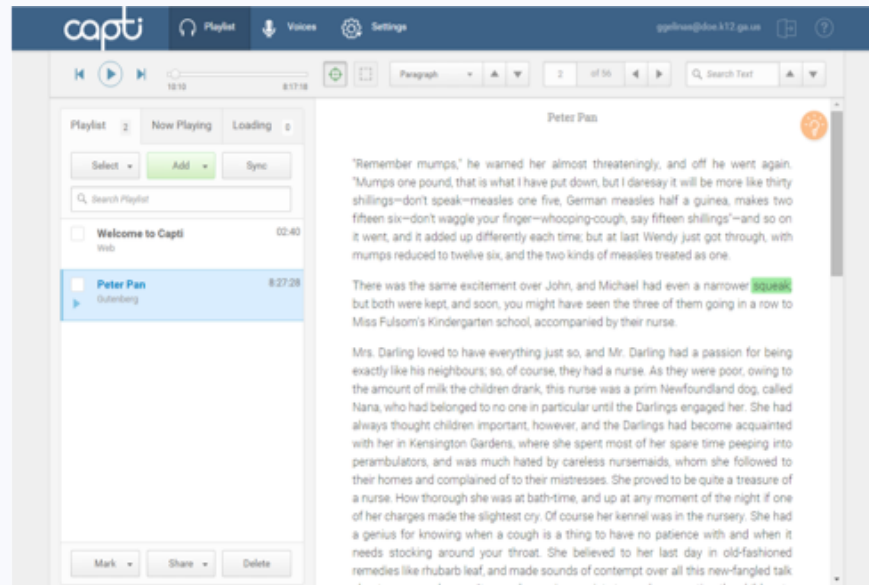
<http://onenote.com/learningtools>



Text Reading Software – CaptiVoice

Programs that will display specially formatted text on the computer and/or mobile devices

- Free versions + paid premium versions

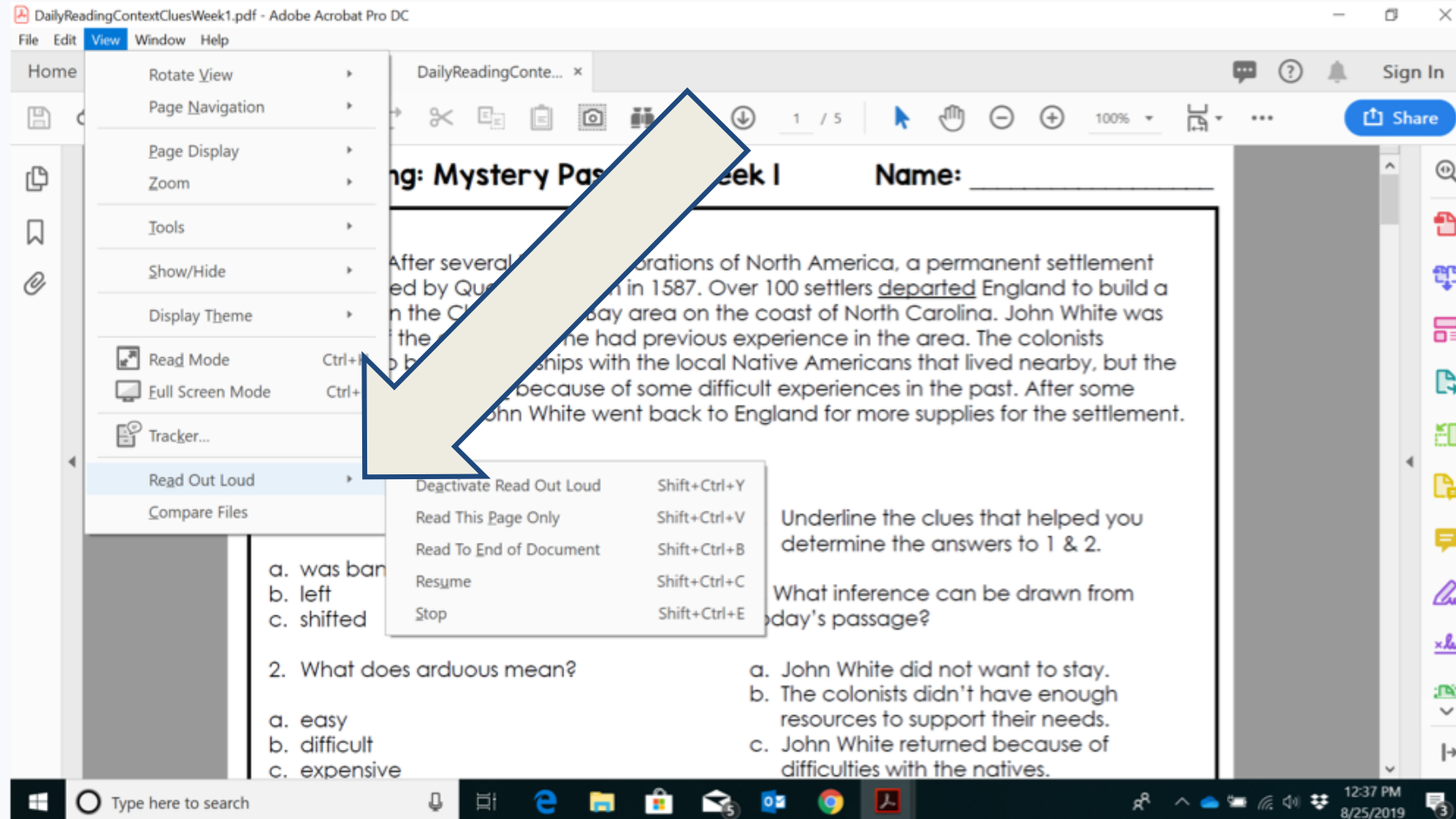


Visual and auditory – provides speech access to unlocked PDFs, and may highlight as it reads

- Adobe Acrobat Reader DC
- Adobe Acrobat Pro DC

PDF Reading Software

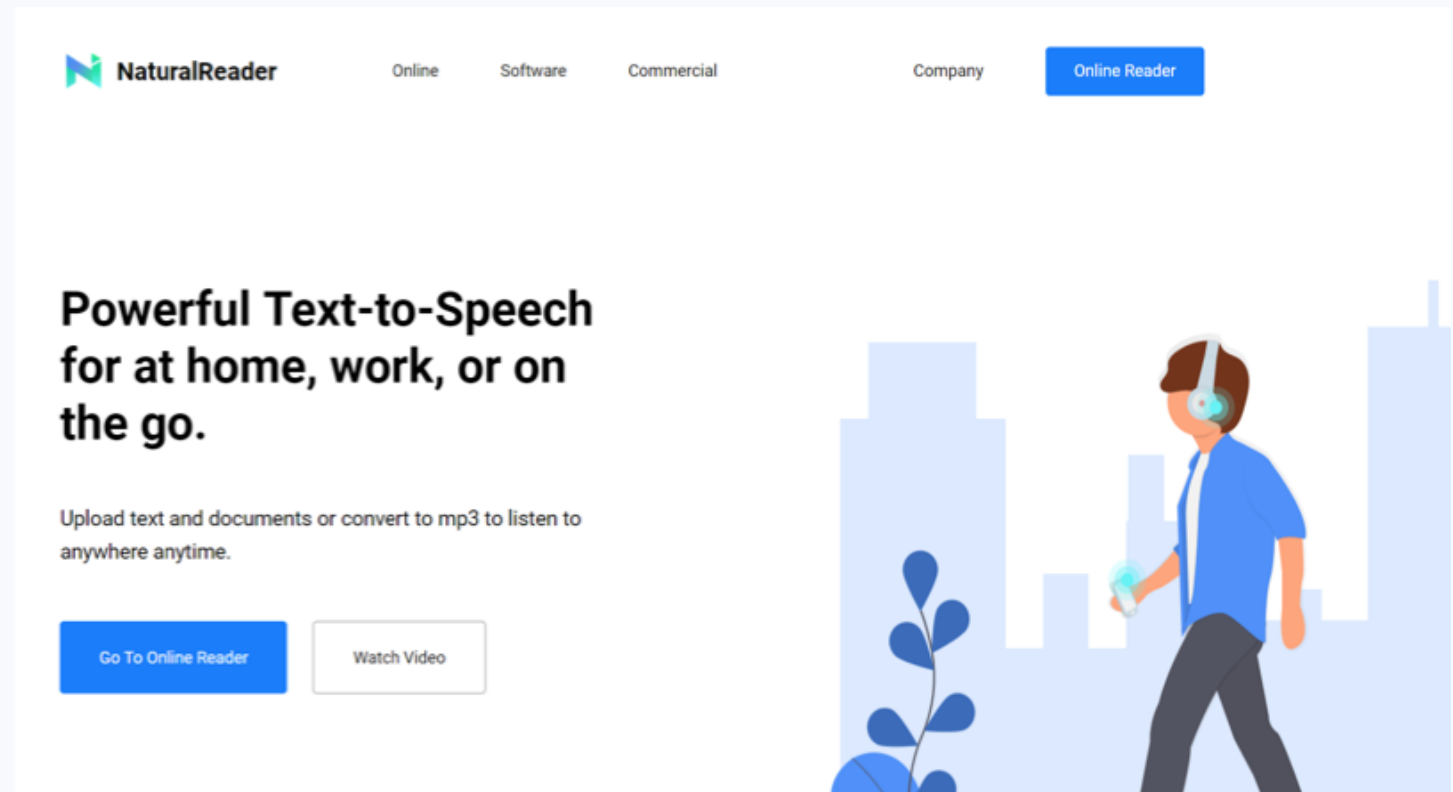
Adobe Acrobat Pro DC



Text Reading Software

Programs that can be used to read text on the computer display. They provide text-to-speech via speech synthesizer software.

- [Natural Reader](#)
- [Snap & Read](#)



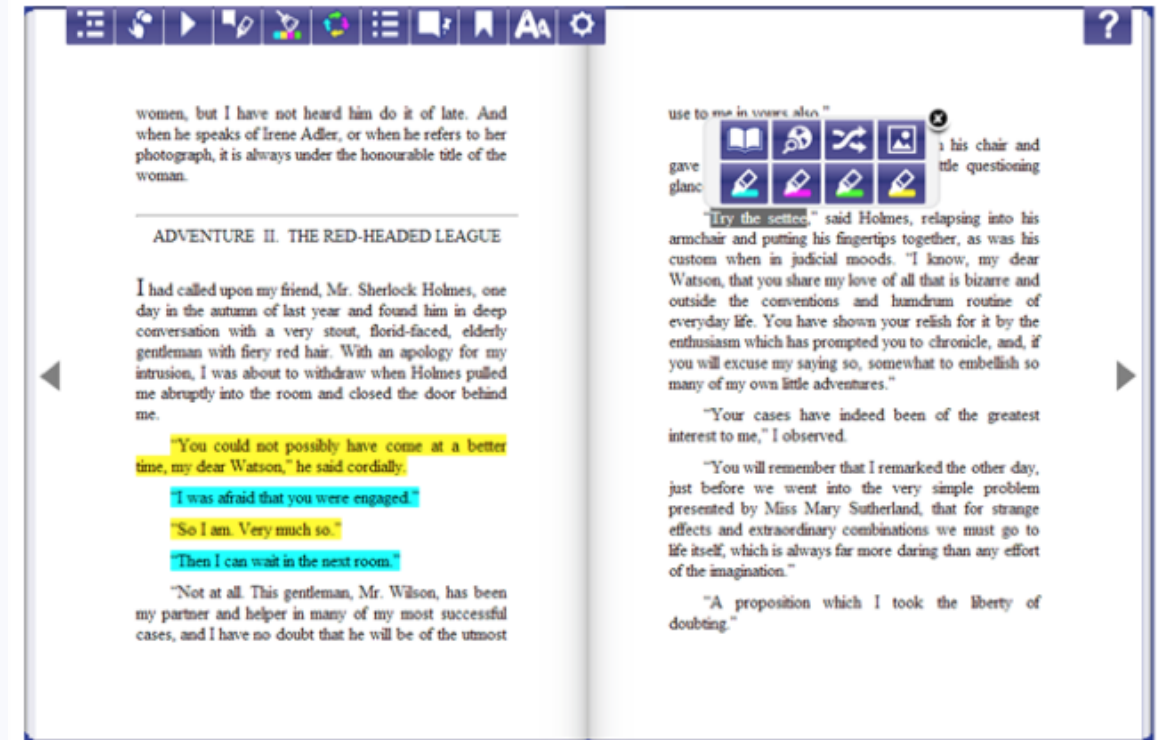
Reading Aids

Provides auditory reading support, visual enhancement features, study aids as well as writing support software.

- [Read&Write](#)
- [Claro Software](#)
- [Dolphin Software](#)
- [Kurzweil 3000](#)
- [Ghotit](#)
- [WordQ 5](#)
- [Premier Literacy Solutions](#)

Read&Write for Google Chrome

- Downloaded books can be opened using this Chrome application
- It allows for the book to be read out loud
- Will read Google Doc, PDFs, and ePub



Chrome Extensions

The screenshot shows the 'Select and Speak' Chrome Extension website. The browser's address bar displays the URL: `chrome-extension://gjfjopfpjmkcggjgipogepmdjmcnihfipkn/options.html?canceled#`. The website has a dark navigation bar with links: 'Select and Speak', 'Home', 'Settings', 'Choose Language', 'FAQ', 'For Schools', and 'Upgrade to Pro'. The main heading reads 'Welcome to Select and Speak' with a subtext 'You are using the Free version'. Below this, two columns compare 'Free Version' and 'Pro Version' features. The 'Free Version' includes a 5000-word daily limit, 27 languages, and 21 speed settings. The 'Pro Version' offers unlimited words, 27 languages, 21 speed settings, autoplay text, and automatic language detection. To the right is a video player titled 'Select and Speak - Free Text to Speech (Ch...)' with a play button and the text 'Natural Sounding Voices'. Below the video is a subscription form with an email input field and a 'Subscribe' button. The Windows taskbar at the bottom shows the search bar and various application icons, with the system clock indicating 4:22 PM on 8/25/2019.

Select and Speak | Home | Settings | Choose Language | FAQ | For Schools | Upgrade to Pro

Welcome to Select and Speak

You are using the Free version

Free Version

This is what you are getting with this version

- ✓ Only 5000 words per day
- ✓ Read Text in 27 Different Languages
- ✓ Read Text at 21 Different Speed Settings

Pro Version

Subscribe to get all these extra features

- ✓ Unlimited Words for non-stop Listening
- ✓ Read Text in 27 Different Languages
- ✓ Read Text at 21 Different Speed Settings
- ✓ Autoplay Text - Fast and Easy
- ✓ Automatic Language Detection

Select and Speak - Free Text to Speech (Ch...)

Select and Speak Text to Speech

Natural Sounding Voices

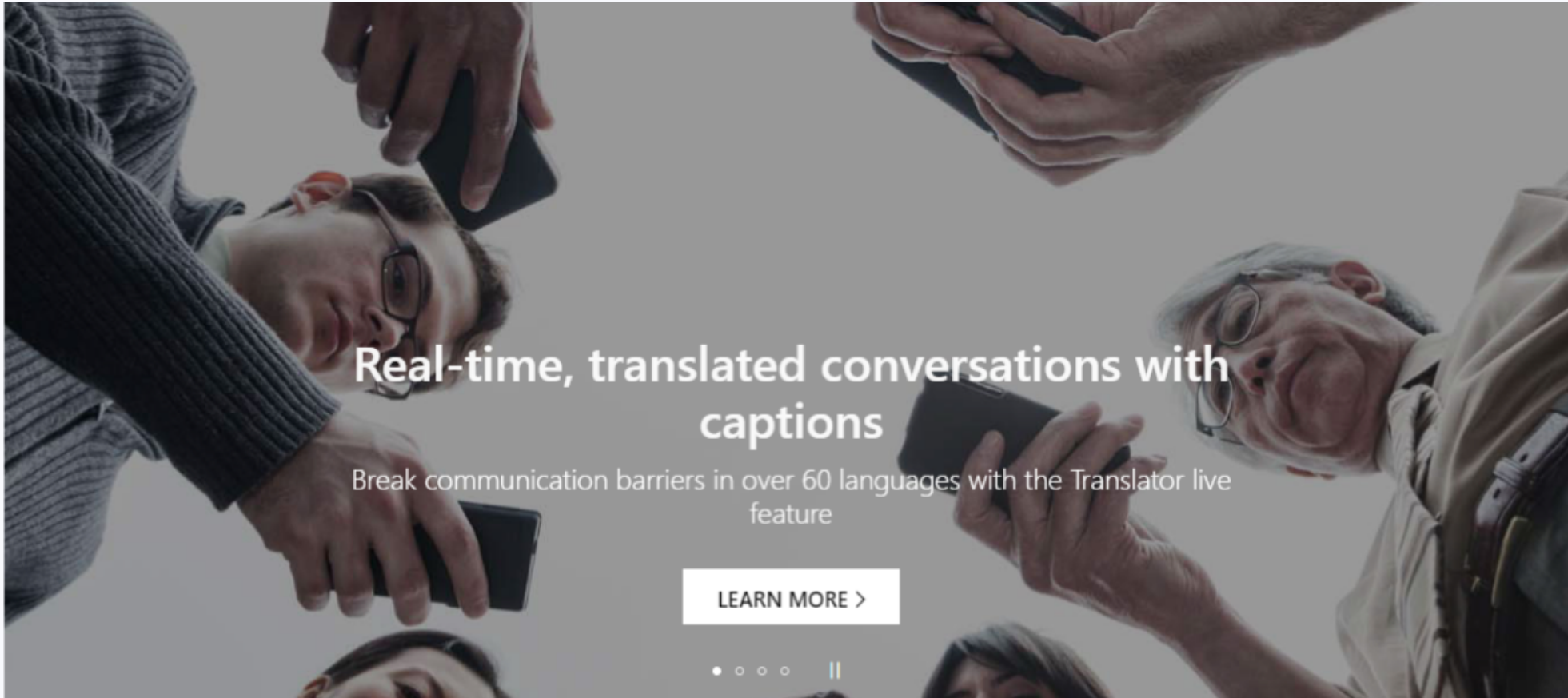
HOLA, HI!, hej, ADIÓS, bye, HALLO

Hear about special offers and product updates

Your Email

Type here to search | 4:22 PM 8/25/2019

Microsoft Translator



Real-time, translated conversations with captions

Break communication barriers in over 60 languages with the Translator live feature

[LEARN MORE >](#)

• ○ ○ ○ ||

Word Identification Aids

- iPad Built-in Dictionary

→ ↻ pmm.nasa.gov/education/water-cycle

The Water Cycle

Copy Define Speak Share...

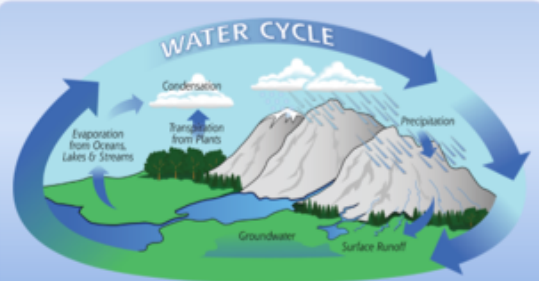


Diagram of the water cycle

Precipitation is a vital component of how water moves through Earth's water cycle, connecting the ocean, land, and atmosphere.

Knowing where it rains, how much it rains and the character of the falling rain, snow or hail allows scientists to better understand precipitation's impact on streams, rivers, surface runoff and groundwater. Frequent and detailed measurements help scientists make models of and

Advanced Search

Browse

Video Image Interactive

Browse

Formal Informal Outreach

The Water Cycle




Diagram of the water cycle

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Advanced Search

Browse Type

Video Image Interactive Lesson Plan

Browse Audience

Formal Informal Outreach

Sub Topics:

Hydrologic Cycle Precipitation Water Properties Earth Systems Water & Life

Dictionary Precipitation

precipitation | prəˈsɪpəˈtʃ(ə)ʃ(ə)n | noun

- 1 *Chemistry* the action or process of precipitating a substance from a solution.
- 2 rain, snow, sleet, or hail that falls to the ground.
- 3 *archaic* the fact or quality of acting suddenly and rashly: Cora was already regretting her precipitation.

Manage Search Web

Speak Selection on iPad

Verizon 2:47 PM 90%
gadoe.org

gadoe
Georgia Department of Education

Search this site...
RSS Pinterest YouTube Google+ Twitter Facebook

Richard Woods, Georgia's School Superintendent

Home
→Curriculum, Instruction and Assessment
→Special Education Services and Supports →Student Success: Imagine the Possibilities

Rules, Manuals & Forms
Special Education
Rules
Implementation Manual
Frequently Asked Questions
Sample Forms
Eligibility Categories
Autism
Deafblind
Deaf/Hard of Hearing (D/HH)
Emotional & Behavioral Disorder
Intellectual Disabilities
Orthopedic Impairment
Other Health Impairment
Significant Developmental Delay
Significant Learning Disability
Speech Language Impairment
Traumatic Brain Injury
Visual Impairment & Blindness
Budgets, Grants, Data Collection and Reporting
Budget & Grant Applications
LEA Consolidated Application
Data Collection

Student Success: Imagine the Possibilities

Copy Speak

The Office of Special Education Programs (OSEP) has required that each State Educational Agency (SEA) develops a State Systemic Improvement Plan that includes a comprehensive, multi-year focus on improving results for Students with Disabilities. Each state must develop a plan that will outline the development of strategies to increase state capacity to structure and lead meaningful change in Local Educational Agencies (LEAs). While the primary focus of the plan is on improvement for Students with Disabilities, the State must also address in its SSIP how the State will use its general supervision systems to improve implementation of the requirements of Individuals with Disabilities Education Act (IDEA). Georgia will implement a systemic plan, "Student Success," in FY16 to improve graduation outcomes for Students with Disabilities.

Downloads:

- Improving Graduation Rate District Memo

Seeing AI

Seeing AI

Seeing AI is a Microsoft research project that brings together the power of the cloud and AI to deliver an intelligent app, designed to help you navigate your day.



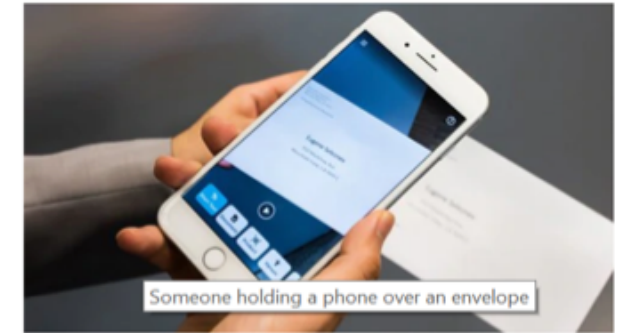
Turns the visual world into an audible experience

With this intelligent camera app, just hold up your phone and hear information about the world around you



Recognize friends and their facial expressions

Recognize and locate the faces of people you're with, as well as facial characteristics, approximate age, emotion, and more



Read text quickly

Hear short snippets of text instantly and get audio guidance to capture full documents

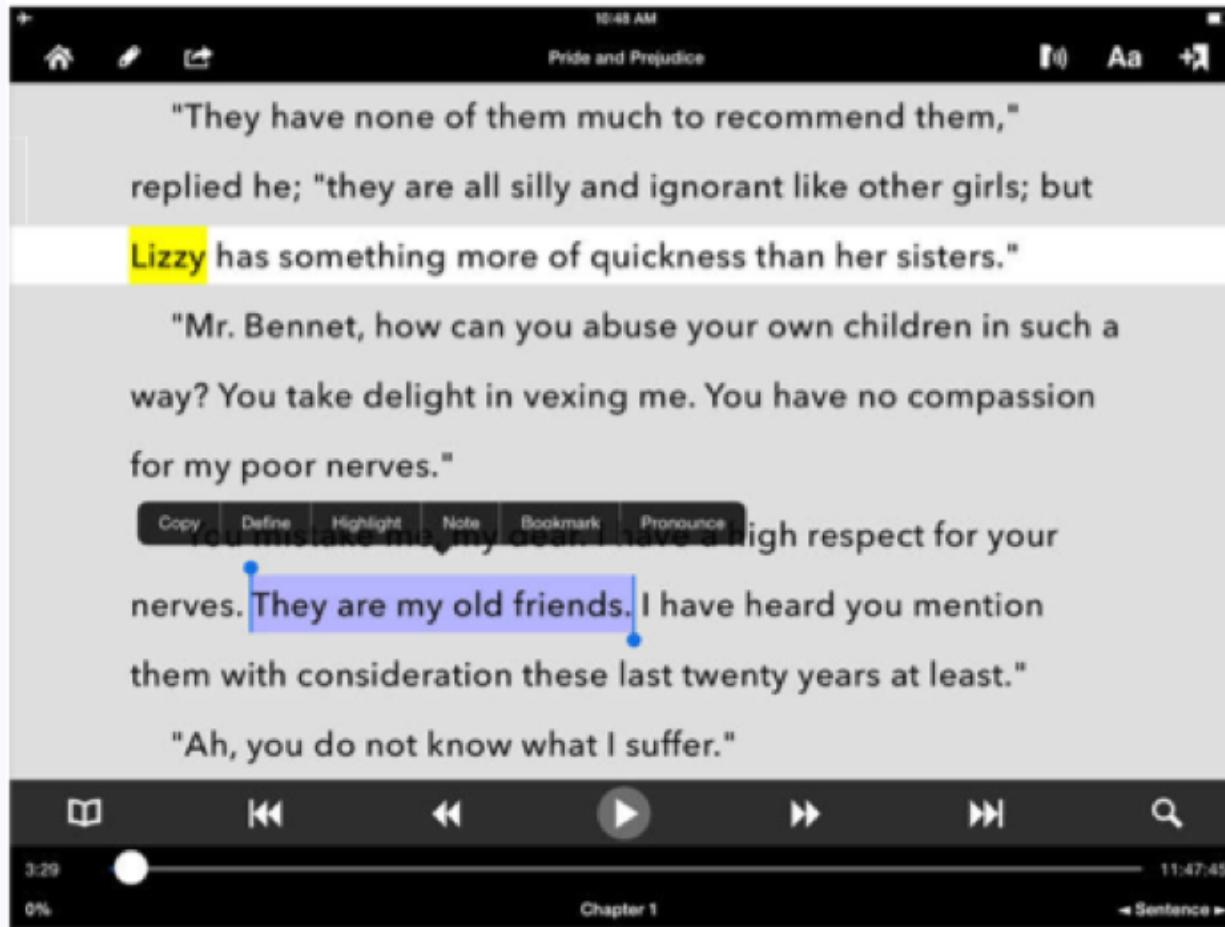


Seeing AI

Turning the visual world into an audible experience.

[Download on the App Store >](#)

Voice Dream Reader



WritePad I Handwriting to Text



WritePad I Handwriting to Text 4+

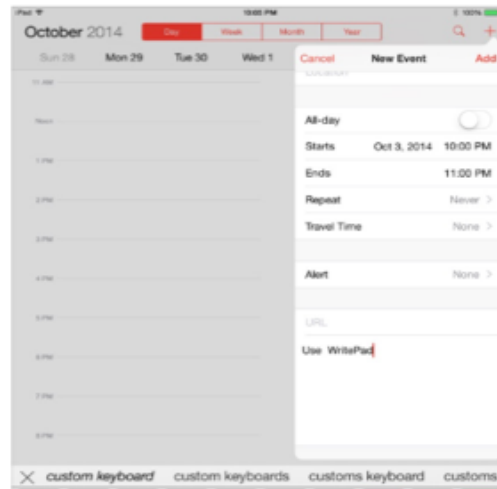
Clever & Clean note taking

PhatWare Corp

★★★★★ 4.0, 1 Rating

\$4.99 - Offers In-App Purchases

iPad Screenshots



WritePad I Handwriting to Text

AudioNote iOS App

App Store Preview

This app is only available on the App Store for iOS devices.

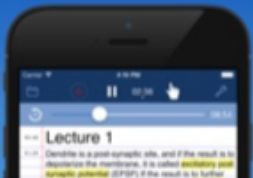


AudioNote™ 4+
Notepad and Voice Recorder
Luminant Software, Inc

#114 in Business
★★★★★ 4.3, 72 Ratings
\$12.99

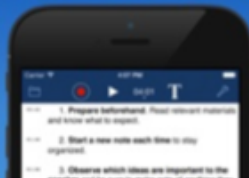
Screenshots iPhone iPad

Take Notes with Recorded Audio



Rich Text Notes

Customizable Fonts, Highlighting, Bullets, Photos

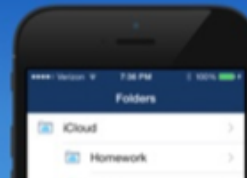


Handwritten Notes

Customizable Pen, Shapes, Colors



Organize, Sync & Share

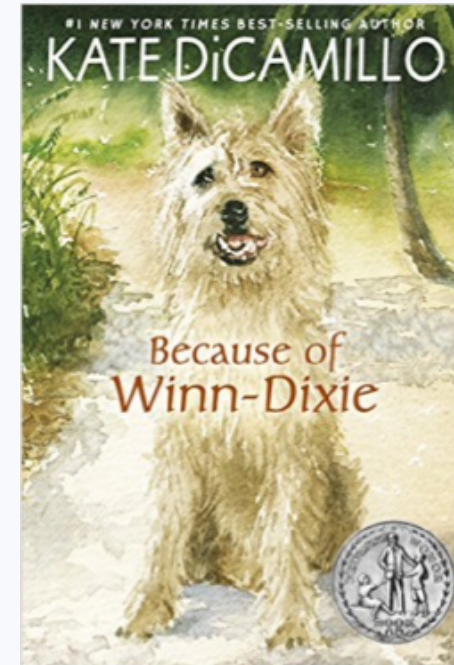


AudioNote

Text Reading Software, continued

Devices that will read

Amazon Echo aka Alexa will read
Kindle books free of charge

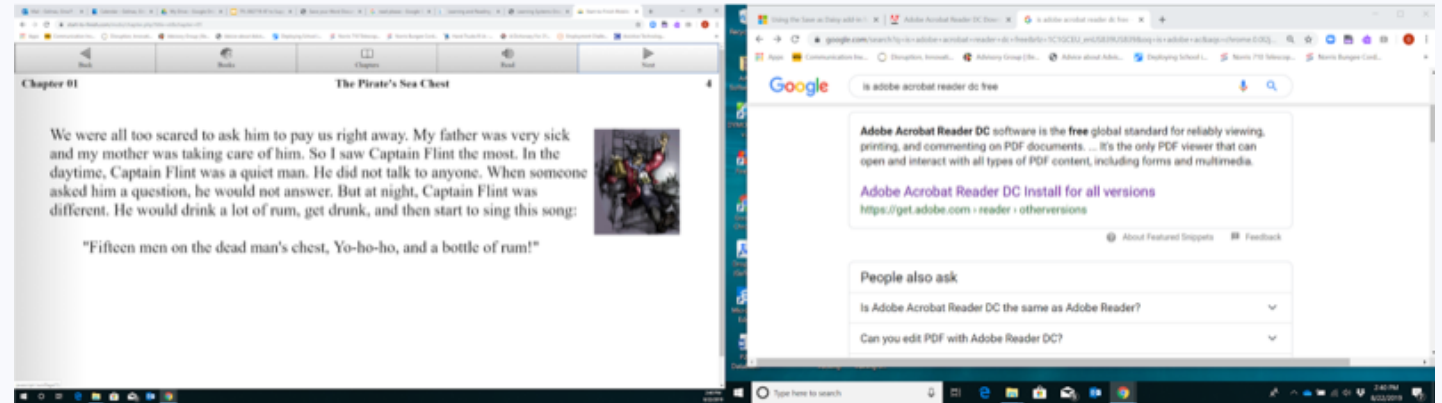


Books for below grade level readers struggling with comprehension

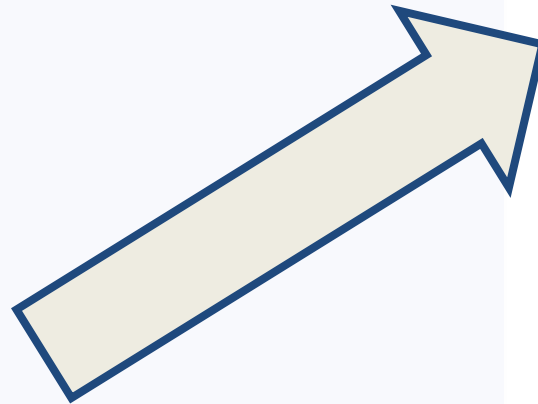
Supported Format, continued

Start-to-Finish Libraries

- High interest, low readability
- Age appropriate topics
- Reduced vocabulary and language complexities (considerate text)
- Supports for comprehension



- Information Content Platform
 - <https://newsela.com>
- Customize reading level for students
- Lots of topics
- [Example](#)



Search Library News Text Sets Collections

Gina Gelinas Get PRO Educator Center

Activities Assign

MAX
1200L
1020L
860L
560L

This undated photo provided by the Helmholtz Centre for Polar and Marine Research at the Alfred Wegener Institute for Polar and Marine Research shows snow samples from Tschuggen, Switzerland, locked and ready for transport to Davos. Scientists at the institute have proven that plastic exists in the snow of the Alps and the Arctic. Photo by: Juerg Trachsel/WSL-Institut für Schnee- und Lawinenforschung SLF via AP

By, Associated Press, adapted by Newsela staff
Published: 08/21/2019 Word Count: 409
Recommended for: Upper Elementary School - Middle School
Text Level: 3

BERLIN, Germany — Scientists have found many tiny plastic pieces in Arctic snow. It shows that microplastics are being pulled into the air. Then they are carried far away.

Microplastics come from things that break apart. They are pieces smaller than one-fourth of an inch. Other studies found them in the air in Europe, Asia and the Middle East.

Wikipedia – Simple English

Mail - Gelinas, Gina P - Out | Calendar - Gelinas, Gina P - | My Drive - Google Drive | TFL 082719 AT to Support | Knight - Wikipedia


en.wikipedia.org/wiki/Knight

Apps VCU Communication Inv... Disruption, Innovati... Advisory Group | Be... Advice about Advis... Deploying School i... Norris 710 Telescop... Norris Bungee Cord...

What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

In other projects
Wikimedia Commons

Print/export
Disable book creator
Download as PDF
Printable version

Languages 
Deutsch
Español
Français
한국어
Italiano
Simple English
Tagalog
Tiếng Việt
中文
⌵ 69 more

Edit links


15th century. This linkage is reflected in the etymology of *chivalry*, *cavalier* and related terms. The special prestige accorded to mounted warriors in Christendom finds a parallel in the *furusiyya* in the Muslim world, and the Greek *hippeis* (ἵππεις) and Roman *equus* of classical antiquity.^[5]

In the late medieval period, new methods of warfare began to render classical knights in armour obsolete, but the titles remained in many nations. The ideals of chivalry were popularized in medieval literature, particularly the literary cycles known as the Matter of France, relating to the legendary companions of Charlemagne and his men-at-arms, the paladins, and the Matter of Britain, relating to the legend of King Arthur and his knights of the Round Table.


Today, a number of orders of knighthood continue to exist in Christian Churches, as well as in several historically Christian countries and their former territories, such as the Roman Catholic Order of the Holy Sepulchre and Order of Malta, the Protestant Order of Saint John, as well as the English Order of the Garter, the Swedish Royal Order of the Seraphim, and the Royal Norwegian Order of St. Olav. Each of these orders has its own criteria for eligibility, but knighthood is generally granted by a head of state, monarch, or prelate to selected persons to recognise some meritorious achievement, as in the British honours system, often for service to the Church or country. The modern female equivalent in the United Kingdom is Dame.

Contents [hide]

- 1 Etymology
- 2 Evolution of medieval knighthood
 - 2.1 Pre-Carolingian legacies
 - 3.1 Training
 - 3.1.1 Page
 - 3.1.2 Squire
 - 3.2 Accolade
 - 3.3 Chivalric code


The 13th-century German knight Hartmann von Aue, from the Codex Manesse

Part of a series on
Imperial, royal, noble, gentry and chivalric ranks



Emperor / Empress /
King-Emperor / Queen-Empress / Kaiser / Tsar

High king / High queen

King / Queen

Archduke / Archduchess

Grand prince / Grand princess
Grand duke / Grand duchess

Prince-elector / Prince / Princess /

Type here to search

5:45 PM
8/25/2019

Example of Simple English Page

https://en.wikipedia.org/wiki/Amazon_rainforest

Supplements printed text with picture symbols for beginning readers

News-2-You Sample Page (National Parks regular)

**news-2-you**

Volume XII, Edition 5 www.news-2-you.com September 28, 2009

WHAT ?

NATIONAL PARKS 

Some countries have old castles and churches.



Some have old pyramids and statues.



But America is not an old country.





America loves the beauty of its wilderness.



<http://www.pbs.org/nationalparks/>
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page 1





News-2-You Sample Page (National Parks higher)

**news-2-you**

Volume XII, Edition 5 www.news-2-you.com September 28, 2009


WHAT ?

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Some countries have old castles and churches. Some have old pyramids and statues.

But America is not an old country.
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<http://www.pbs.org/nationalparks/>
© 1997-2009 n2y, Inc. © Symbolix, LLC used with permission.

page 1

Picture Assisted Writing and Literacy Software

Provides speech of selected text by letter, word, sentence, or paragraph with optional simultaneous highlighting

[Symwriter 2](#)

[PixWriter](#)

[Clicker 7](#)

Account | Wishlist | Log In | Call 1-800-327-4269


Attainment Company

Serving People with Disabilities

Curriculum Technology Transition Resources Aging Support Blog

Home > PixWriter Software

Curricular Concept and Vocabulary



Lists, comprehension questions, book reports and more are accessible with flexible button options.

PixWriter Software

A picture-assisted writing tool

Product Features:

- Helps students to write independently with illustrated word banks
- Provides symbol support with highlighted text and speech
- Includes 10,500 pictures that automatically match to words
- Documents may be saved, printed, or emailed

Product Name	Item No.	Price	Qty
PixWriter Software	SL-X07W	\$125.00	0
Pixwriter - Windows download	SLW-TDL07W	\$99.00	0
PixWriter - Mac download	SLM-TDL07W	\$99.00	0

[Add to Cart](#)



Writing and Spelling Difficulties and Supports

Why is Writing Hard?

Struggling writers often have difficulty in one or more of the following areas:

- **Handwriting**
- **Conventions of writing**
- **Writing process**

To provide appropriate supports, we must determine the types of difficulties the student is experiencing.

Types of Writing Difficulties

Conventions of Writing

- Spelling
 - requires hearing sounds correctly and using the correct letters in correct sequence
- Punctuation
 - requires using the correct symbols to express thoughts appropriately
- Using correct grammar
 - requires simultaneous use of vocabulary, parts of speech, types of phrases or clauses and grammatical rules

Types of Writing Difficulties, continued

- Writing Process
 - A process that requires planning, organization, drafting, editing, and revising skills
- Difficulties may include:
 - Generating ideas
 - Word retrieval difficulties
 - Organizing thoughts into a coherent story
 - Revising the story

Remediation of Deficit Areas

Strategies and skill-based instruction is needed to improve deficit areas. Assistive technology can play a role in remediating skills.

- For example, for a deficit in spelling, use of a phonics program which utilizes multiple learning avenues, along with teaching strategies, can assist the student with improving his spelling skills.

Remediation of Deficit Areas, continued



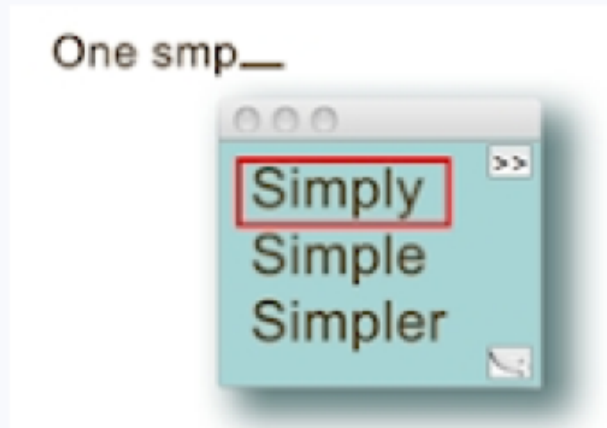
Remediation tools

- Strategies and skill-based instruction to improve the skills in area of deficit
- Assistance for finding remediation technology
 - Media Specialist
 - Technology Specialist
 - Content Specialist
 - Fellow Educators
 - Research
 - Professional Development

Compensation of Deficit Areas

Generally, assistive technology serves to compensate for deficit areas by enhancing access to and success in completing instructional tasks which require students to complete written tasks.

- For example, a voice output word prediction program will compensate for difficulties in areas such as spelling, grammar, and vocabulary usage. It may not directly remediate writing difficulties.





Examples of Frequently Used Tools

Positioning Aids

Help maintain posture and stabilize student's books and paper:

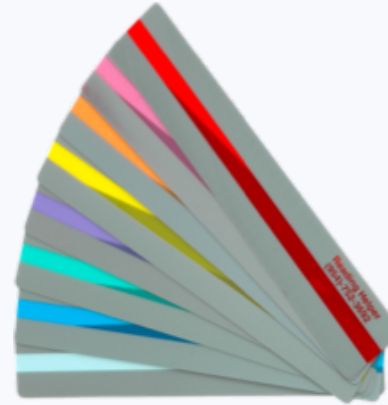
- Clipboards and book stands
- Non-skid material
- Slant boards
- Page Up



Contrast Aids

Alter the foreground-background contrast to promote visual access to text:

- Highlighters or highlighting tape
- Reading helper, E.Z. Reader
- Color overlays



Adapted Writing Aids

Improve legibility, maintain grip, delay fatigue and increase comfort:

- Pencil grips
- Adapted pens/pencils



Adapted Paper and Writing Guides

Alternate paper of different lines, spacing, colors and/or layout

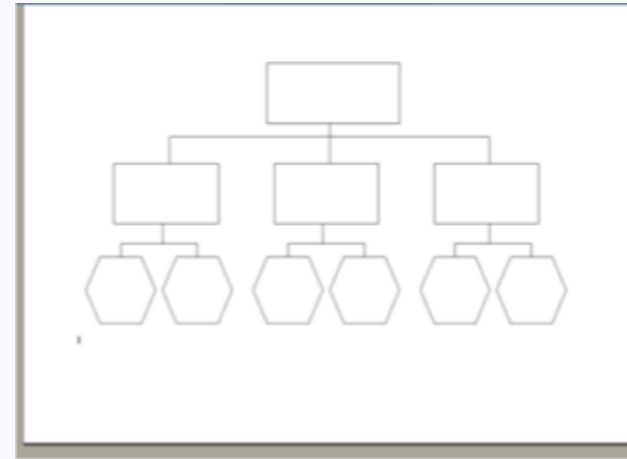
- Raised line paper
- Bold line paper
- Colored paper
- Writing paper with different colored shading in bottom-half of space
- Graph paper
- Writing guides



Printed Graphic Organizers

Printed organizational support for students with difficulty brainstorming and organizing thoughts

- Teacher made graphic organizers
- Microsoft Word
- Online printable graphic organizers
 - freeology.com

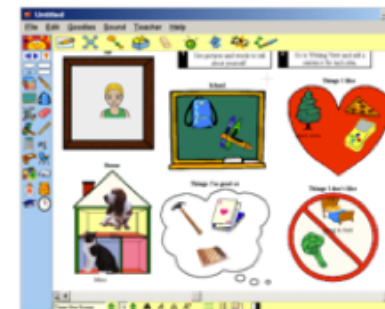
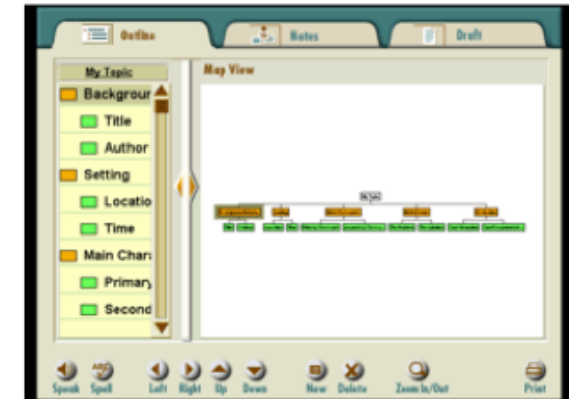


A KWL graphic organizer template. At the top, there are fields for 'Name: _____', 'Date: _____', and 'Period: _____'. Below these is a section labeled 'KWL' with a 'Topic:' label and a rectangular box for writing the topic. The main body of the organizer is divided into three vertical columns. The first column is labeled 'K (What I know)', the second is labeled 'W (What I want to know)', and the third is labeled 'L (What I have learned)'. Each column has a large rectangular box for writing. At the bottom right corner, there is a small copyright notice: '© Freeology.com'.

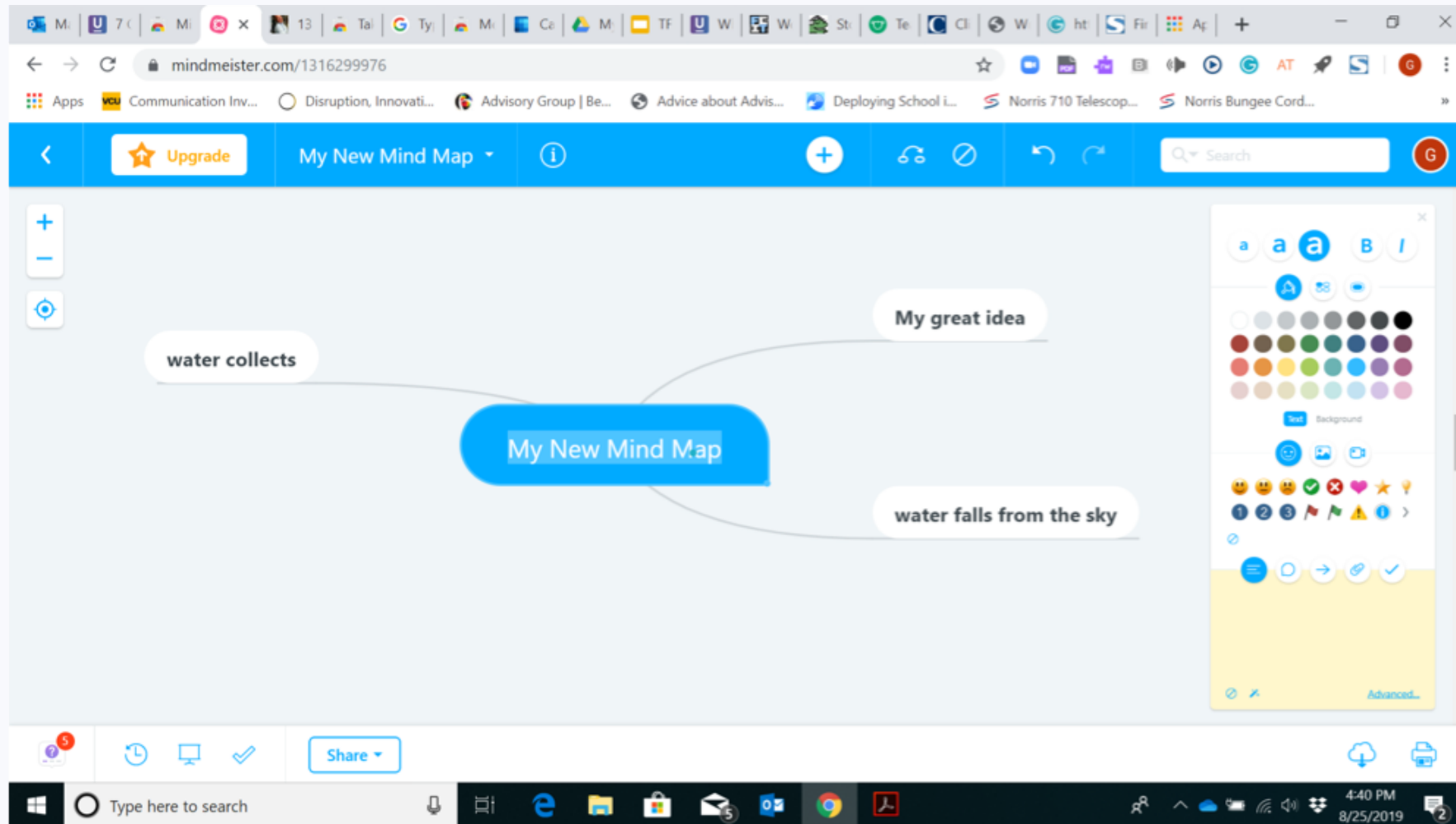
Concept/Webbing Applications

Organizational support for students with difficulty brainstorming and organizing thoughts

- Inspiration
- Kidspiration
- Lucidchart
- Gliffy

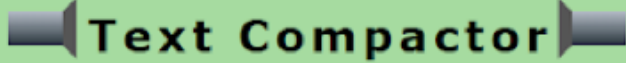


Mindmeister – Chrome App



[MindMeister](#)

Text Summarization

**Text Compactor**
Free Online Automatic Text Summarization Tool

[Home](#)
[About](#)

Follow these simple steps to create a summary of your text.

Step 1
Type or paste your text into the box.

Step 2
Drag the slider, or enter a number in the box, to set the percentage of text to keep in the summary.

50

%

Step 3
Read your summarized text. If you would like a different summary, repeat Step 2. When you are happy with the summary, copy and paste the text into a word processor, or [text to speech program](#), or [language translation tool](#)

© 2010-2016 [Knowledge by Design, Inc.](#)

[Text Compactor](#)

Personal Vocabulary or Spelling Dictionaries

Lists of commonly misspelled words

- Quick-Word Booklets
- Quick-Spell Booklets

Personal dictionaries or spelling lists

- Notebook



Recorders

Devices for recording notes and responses

- Digital recorder
- LiveScribe/Echo Smartpen
- Apps



Standard Word Processing Software

Allows students to enter, edit and store text

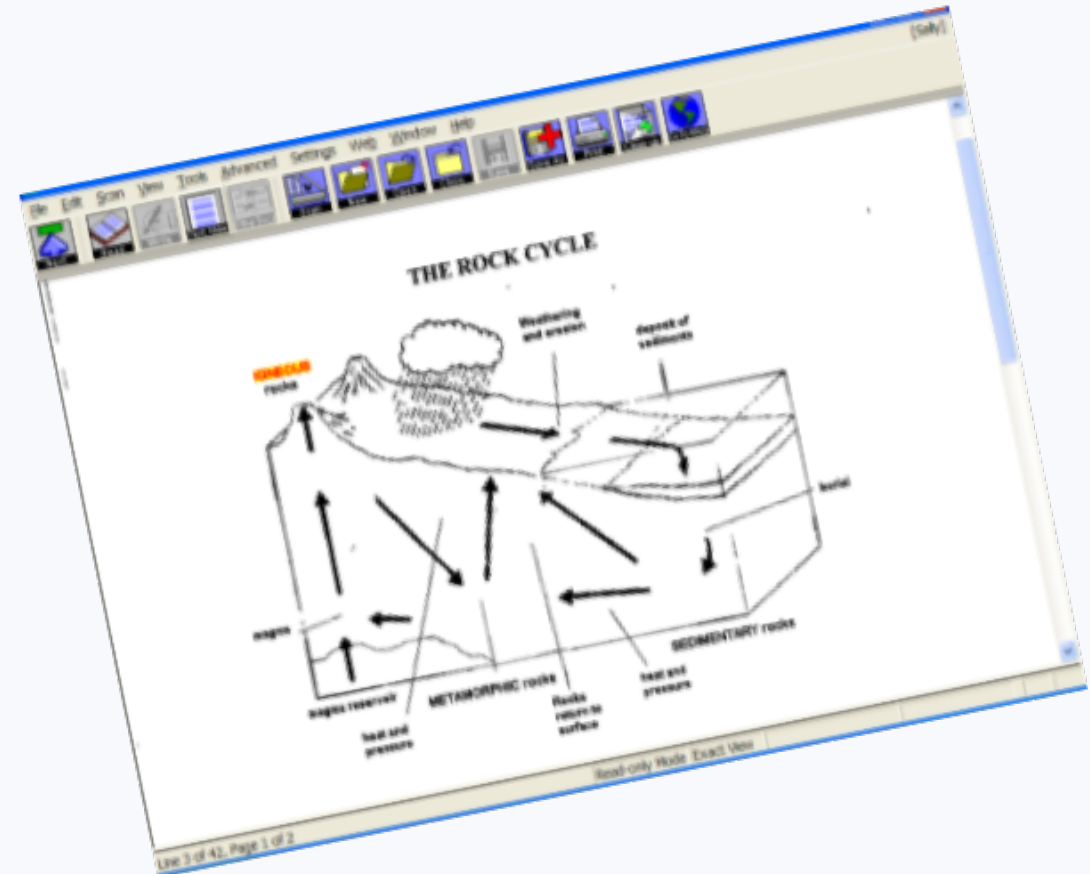
- Microsoft Word: a powerful standard word processor with built-in study support features
 - Visual accommodation – font, background, line spacing
 - Text-to-speech
 - Word Count
 - Highlight text and colored fonts
 - Outlining feature
 - Dictionary and Thesaurus
 - Comment



Writing, Notetaking, and Study Support

Software that provides notetaking, reading and study support

- [Read&Write](#)
- [Claro Software](#)
- [Dolphin Software](#)
- [Kurzweil 3000](#)
- [Ghotit](#)
- [WordQ 5](#)
- [Premier Literacy Solutions](#)



Grammar Correction and Supports

[Grammarly](#)

[Ginger](#)

grammarly

Great Writing, Simplified

Compose bold, clear, mistake-free writing with Grammarly's AI-powered writing assistant.

Add to Chrome it's free

★★★★★ 34,000+ Chrome store reviews
20 million people use Grammarly to improve their writing



1 CRITICAL



Once you sign the contract, we'll get started.
If you have any questions, please don't hesitate to reach out to Alice or myse

Change the pronoun

me

Make No Mistake!

Write better and faster with Ginger
The World's Best Grammar Checker

Add to Chrome it's free



Write everywhere with complete confidence



Word Prediction Software

Co:Writer

The screenshot shows the website for Don Johnston Human Learning Tools. The header includes the company logo and navigation links: Products, About Us, Blog & Case Studies, and Webinar. Below the header, a breadcrumb trail reads: **Up to:** Overview Features Where it Works Testimonials Pricing Setup FAQs Resources. The main content area features the FlexSpell™ logo and a description: "Turn around phonetic and inventive spellings of even the least sound-outable English spellings like elephant or rhythm." On the right side of the page, there is a text input field with the text "Let's sup|". A blue dropdown menu is open, displaying a list of suggestions: 1: suppose, 2: start, 3: sound, 4: suggest, 5: success, and 6: (with a microphone icon).

DON JOHNSTON
Human Learning Tools

Products About Us ▾ Blog & Case Studies ▾ Webinar

Up to: Overview Features Where it Works Testimonials Pricing Setup FAQs Resources

FlexSpell™

Turn around phonetic and inventive spellings of even the least sound-outable English spellings like elephant or rhythm.

Let's sup|

- 1: suppose
- 2: start
- 3: sound
- 4: suggest
- 5: success
- 6:

Electronic Worksheets

The screenshot shows a web browser window with multiple tabs open. The active tab is 'PDFescape - Free PDF Editor'. The address bar shows 'pdfescape.com/?noredirect=true'. The website header is red with the PDFescape logo and navigation links: 'About', 'Developers', 'Support', 'Logout', 'My Account', and 'Upgrade'. The main content area features the text 'The Original Free PDF Editor & Form Filler Online'. On the left, a laptop displays a form with fields for 'First Name: Fill Out', 'Last Name: Forms', 'Product Type: Standard', 'Product Support: 6 Months' (circled in red), and 'Card Type: Visa'. On the right, there is a dashed box for file upload with the text 'Drop PDF Here (up to 10 MB and 100 pages)' and buttons for 'Choose File', 'No file chosen', and 'Upload'. Below the laptop, it says 'works with' followed by logos for Chrome, Firefox, Edge, IE, Opera, Safari, and Windows. At the bottom, there is a large orange button that says 'Try Desktop'. The Windows taskbar at the bottom shows the search bar and various application icons.

[PDF Escape](https://pdfescape.com/)

PDF Expert 7 – iOS App



- Annotate PDFs
 - Typed or free-hand notes
- Connections to Cloud-based storage
- Conversions
 - Word
 - Web
 - Image

Electronic Worksheets

Form-filling software to scan worksheets into the computer

- [PaperPort 14](#)
- [Formdocs](#)

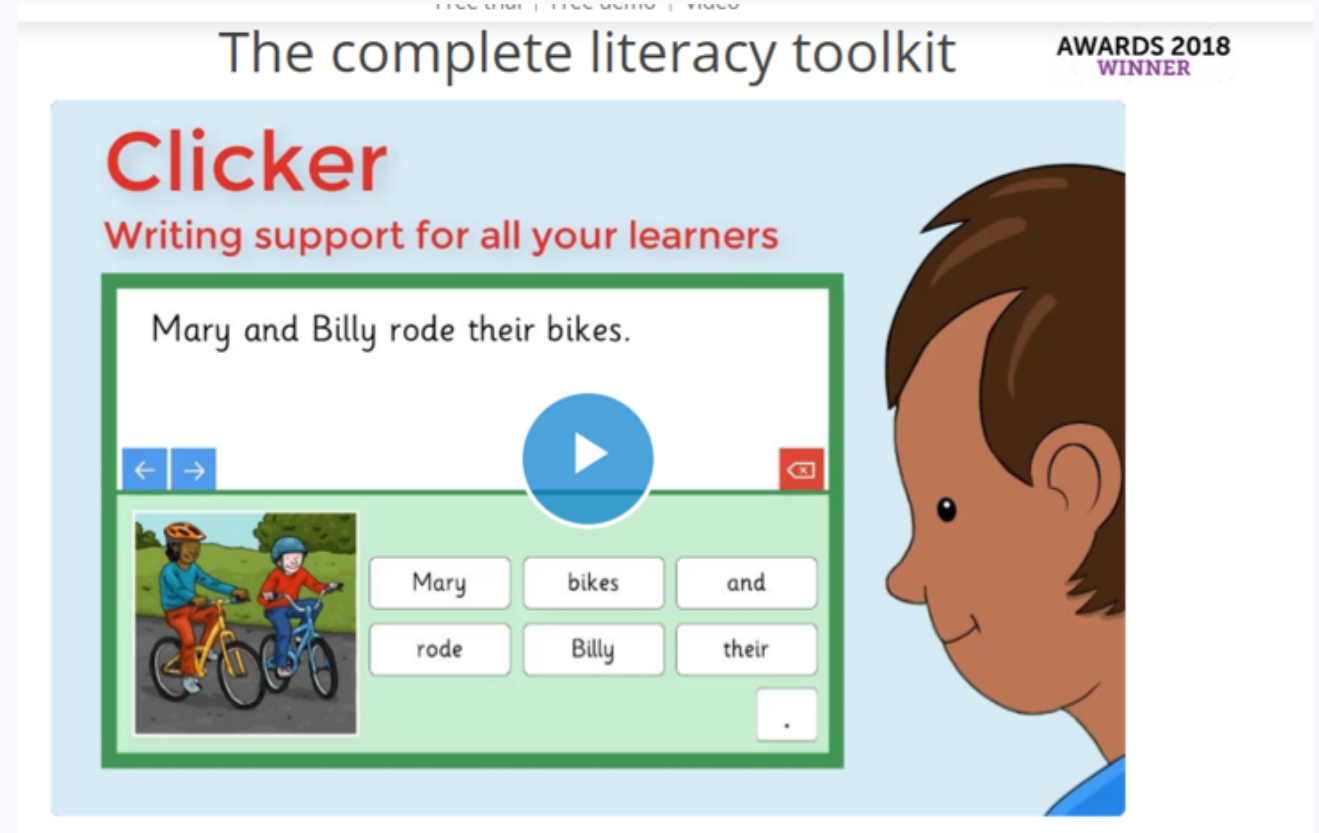
Picture Assisted Literacy and Writing Software

Provides speech of selected text by letter, word, sentence, or paragraph with optional simultaneous highlighting

[Symwriter 2](#)

[PixWriter](#)

[Clicker 7](#)



Speech Recognition Software

Software that allows speech that is spoken into a microphone to be converted into text displayed on the monitor

- Microsoft Speech Recognition
- Dragon Naturally Speaking
- Dragon Dictate for Mac
- Mac OS X Dictation
- Google's Voice Typing

Speech Recognition – Chrome

The screenshot shows a Chrome browser window with the Dictanote website open. The browser's address bar shows 'dictanote.co'. The website has a clean, modern design with a white background. On the left, there's a large heading 'Capture your ideas with Dictanote' and a subheading 'Switch effortlessly between using the keyboard and your voice to type out notes. Work smarter and more productively with fast, accurate dictation and transcription.' Below this is a green button that says 'GET STARTED FOR FREE'. To the right of the main content, there's a sidebar with a list of notes. The first note is titled 'Let's try voice typing' and was created 'few seconds ago'. A tooltip is visible over the note, showing 'VOICE TYPING (CTRL+V+S)' and 'type 1 hour'. The browser's taskbar at the bottom shows various icons, including the Windows logo, search bar, and several application icons. The system clock in the bottom right corner indicates the time is 4:27 PM on 8/25/2019.

Dictanote

Get Started For Free Existing User

Let's try voice typing

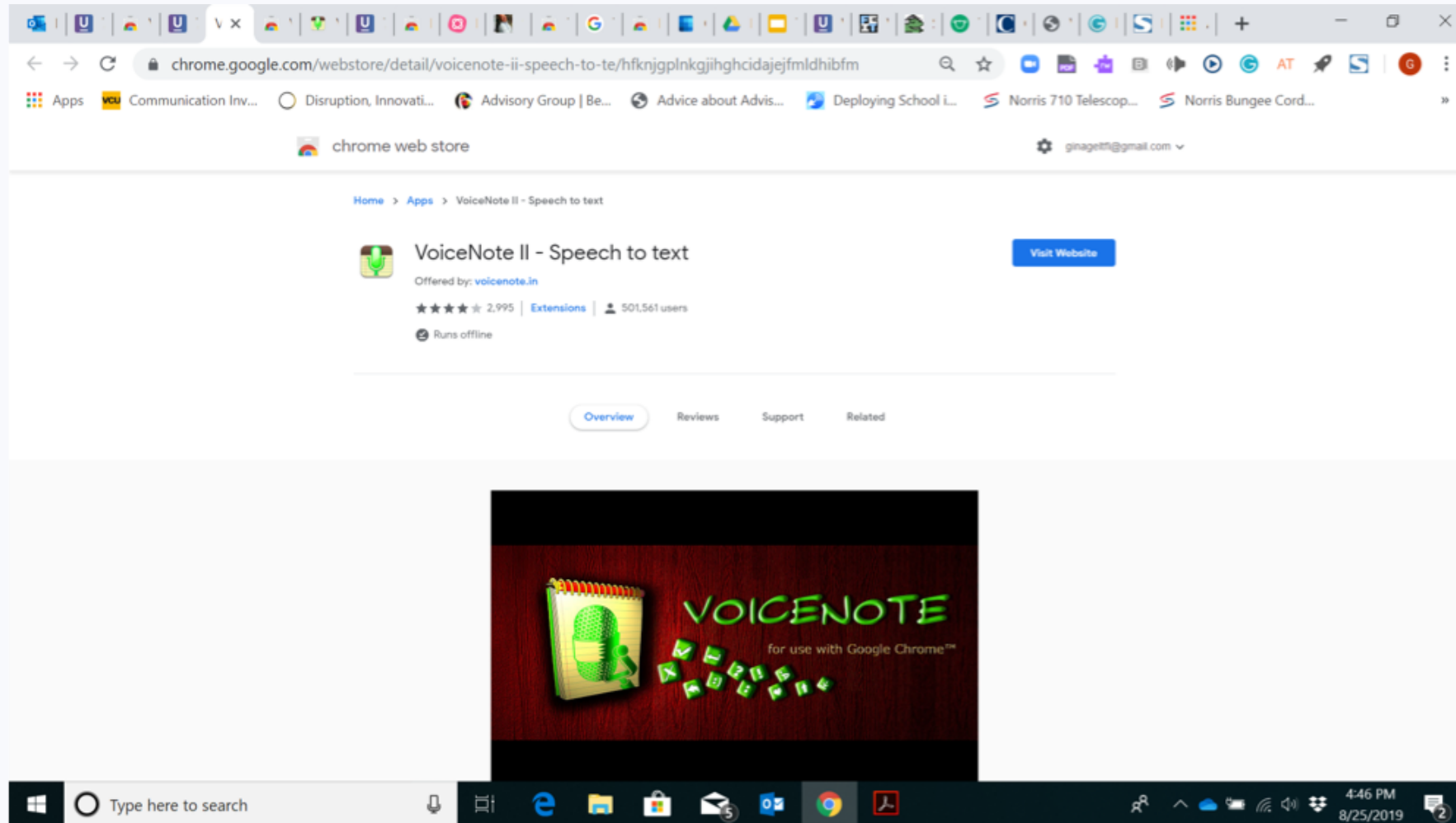
VOICE TYPING (CTRL+V+S)

type 1 hour

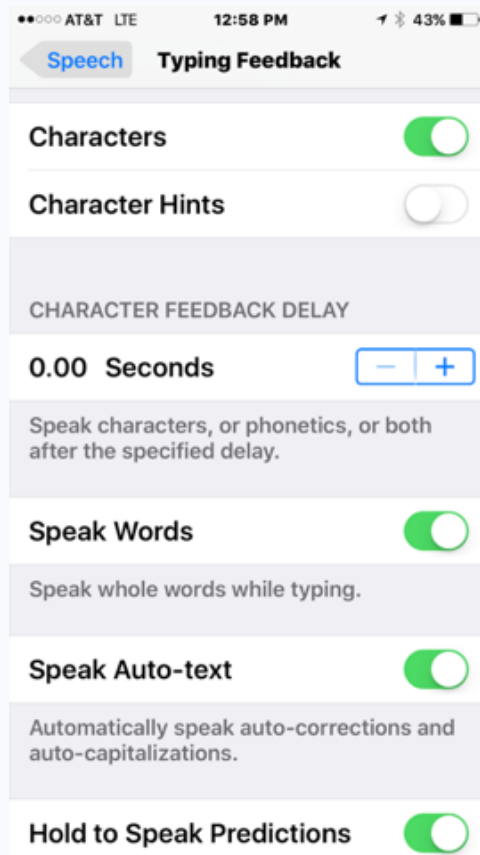
GET STARTED FOR FREE

Works best on Google Chrome 40+ and Chrome Mobile Browser

Speech Recognition – Chrome App



iOS Keyboard Accessibility



- General
- Speech
- Typing feedback

Understood.org Tech Finder

Tech Finder
Expert-approved apps & games for your child

Writing ▾

Select grade ▾

Select technology type ▾

Find

powered by
common sense media

Parenting Coach
Practical ideas for social, emotional and behavioral challenges

Select challenge ▾

Select grade ▾

Get Ideas

Decision Guide
Key questions to help you weigh your options

School Choices

School Services

Is My Child Ready?

Outside Support

Go

What's New on Understood

Daniel Radcliffe Fun Facts
Plus 4 other inspiring stories the Understood team loved in July

Managing Back-to-School Anxiety
Get tips to help your child prepare for the new school year

What's Your Superpower?
Why author Dav Pilkey sees his ADHD and dyslexia as superpowers

Teaching Kids to Problem Solve
An Edge Foundation coach teaches problem-solving skills

[Understood.org](https://www.understood.org)

Benefits of Assistive Technology

- Productivity
- Independence
- Achievement
- Motivation
- Opportunities
- Control
- Engagement
- Access
- Participation
- Self-esteem
- Inclusion
- Quality of life

Things to Keep in Mind

Technology in and of itself is not a solution; it should be paired with research-based instructional strategies.

More Things to Keep in Mind

Technology is no substitute for good instruction.

Technology should be used in conjunction with other available supports.

Technology use should be monitored and changes made as needed.

Questions?



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