

Welcome to the Webinar

- Remember for sound use a phone and call in using:
1-866-516-5393
and enter pass code:
80927889
- Everyone will be on mute
- For technical support call 952-838-9000 and let them know you need help with the Simon Technology Center webinar



Page 1



Assistive Technology Training Series (sponsored by a grant from MDE) Tuesday June 2, 2009

AT for Reading, Writing and Math

© 2007, PACER Center

Your Presenters

Your Presenter

- Tara Bakken, Assistive Technology Specialist
- PACER Center's Simon Technology Center



Tech Support

- Meghan Kunz, Assistive Technology Specialist
- PACER Center's Simon Technology Center



Page 3

Upcoming Webinars

- Tuesday June 16th 1:00 - 2:30 CT**
Building Capacity for Assistive Technology
Sponsored by a grant from MDE
- Thursday July 16th 2:00 - 4:00 CT**
All About Digital Books
By PACER Simon Technology Center



Page 4

Registration Information

www.PACER.org/workshops/emails/2009atseries.htm

For information on this Webinar series, please call PACER Center at 952-838-9000.

This series is funded by a grant from the Minnesota Department of Education.

Can't make it to the Webinars? They will all be archived on PACER.org and will contain links to resource materials relevant to each session

Page 5

About this Webinar series

- All webinar trainings will be archived and made available on the PACER website 1 - 2 weeks following the date of the original training along with support materials at <http://www.pacer.org/pacerwebinars/>
- Participants from MN that attend 3/4 of the live core trainings will receive a free membership to the STC lending library

Page 6

Asking Questions & Chat

- **Please ask questions at any time!**
- Ask questions by typing your question into the "Question" box on the Webinar toolbar and clicking "send."
- For technical assistance, you can "chat" with technical support staff using the chat box on your toolbar or by calling technical support at 952-838-9000 and letting them know you need help with the Simon Technology Center webinar

Page 7

PACER Center

- Not-for-profit organization
- Serving parents of children with disabilities
- Primarily staffed by parents of children with disabilities
- Over 30 different programs.



Page 8

Simon Technology Center



The STC is dedicated to making the benefits of technology more accessible to children and adults with disabilities, through a collaborated effort involving parents, professionals, and consumers.

Page 9

STC Services

- Assistive Technology Information and Referral
- Lending Library
- Free Consultations
- Individualized Trainings
- Workshops and In-services
- SUPER Service



Page 10

National Resources

- **PACER's referral service** is available nationwide
1-952-838-9000
www.pacer.org
- **ATA: The Alliance for Technology Access**
 - Directory of ATA Centers
<http://www.ataccess.org>
- **ALLIANCE: Technical Assistance for Parent Centers**
 - Parent center directory
 - Coordinated by PACER Center
<http://www.taalliance.org>
- **FCTD: Family Center on Technology and Disability**
 - Information and services on assistive and instructional technologies
 - Family Center's Member Database (database of organizations nationwide)
www.fctd.info

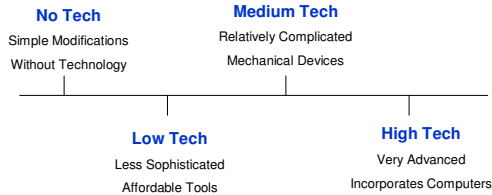
Page 11

What to Expect

- Fast-paced introduction to many products for reading, writing, & math
- For further information or instruction on individual programs & devices you may:
 - Set-up a free consultation
 - Come in to library during open hours to try
 - Set-up an individual training \$50/hr
 - Check vendor website for free trial demo

Page 12

Assistive Technology Continuum



Page 13

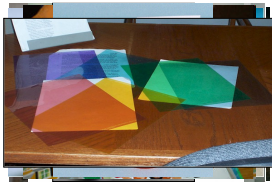
Reading Tools



Page 14

Low Tech Reading Tools

- Colored Overlays
- Page holder
- Reading Helper
- Highlighter tape
- Book holder
- Highlighter
- Magnifying Bar
- Pocket Magnifier
- LightWedge
- Hefty Tabs



Resources:

- www.onionmountaintech.com
- www.integrationscatalog.com
- www.seeitright.com
- www.ifiten.com

Page 15

Handheld Dictionaries & Spellers

Medium Tech



Speaking dictionaries offer auditory and visual supports for improving vocabulary, reading comprehension, and writing.

Children's Talking Dictionary & Spell Corrector By Franklin

- Price: \$60
- Features: Over 40,000 definitions, automatic phonetic spell correction, an animated handwriting guide, a rhyme finder, and five word-building games
- www.franklin.com



Reading Pen Basic Edition By WizCom Technologies

- Price: \$279
- Features: Scans single words or full lines of text. Includes English dictionary, thesaurus, and English-Spanish dictionary. Left- or right-handed use.
- www.wizcomtech.com

Page 16

E-text vs. Audio Files



- **Digital Electronic Text**
 - Visible text on screen
 - Can be converted into audio file
 - Read out loud with text to speech programs
 - Commonly referred to as E-books
- **Digital Audio Files**
 - No text available
 - Played with audio players
 - Example: books on CD, MP3 formatted audio books



Page 17

Where to Find E-Books

- **On the Internet**
 - **Project Gutenberg;** www.gutenberg.net
 - Over 27,000 free e-books
 - **Open Library;** <http://openlibrary.org>
 - Over one million books with full text
 - **NetLibrary;** www.netlibrary.org
 - Over 170,000 materials



*See the Resources for Digital Literature handout (<http://www.pacer.org/publications/stc.asp> : Presentation Handouts)

- **Scan the print book** into the computer using a scanner.



Page 18

E-Books for Students with Print Disabilities

Bookshare.org

- Must have a certified print disability
- Books are current and many under copyright
- Many textbooks and other instructional materials are available
- Available in the DAISY format
- Membership is free to U.S. Students with qualifying disability
- Organizational, school, and individual memberships available
- Membership includes free book playing software that reads the text out loud: VictorReader Soft and READ:OutLoud



Page 19

DAISY Format

- **DAISY: Digital Accessible Information System**
- Allows navigation access of a digital book similar to a printed book
 - Place bookmarks
 - Navigate by page number
 - Navigate by chapter
 - Navigate by section
- Where to find Daisy formatted files: www.Bookshare.org, www.rbfd.org



Page 20

Software for Playing E-Books on Your Computer

- **Text-to-Speech Programs:**
 - Speak e-text out loud using computer voice
- **Scan & Read Programs:**
 - Convert printed text into digital text using scanner, scanning software.
 - These programs also "read" aloud the text and offer additional study aids



Comparison charts available for text-to-speech programs and scan & read programs at: <http://www.pacer.org/publications/stc.asp> : PRESENTATION HANDOUTS

Page 21

Text-to-Speech Programs

In general:

- Read out loud most documents, email, and Internet pages
- Convert text to audio files
- Generally affordable – Free to under \$100
- **Don't have ability to scan print books**

Examples:

- TextAloud; (\$30-150+) <http://www.nextup.com>
- Natural Reader; (\$50-300) <http://www.naturalreaders.com>
- Read Please; (Free) <http://www.readplease.com>
- Victor Reader Soft; www.humanware.com
- Read:OutLoud; (\$299) www.donjohnston.com

Page 22

Text-to-Speech Program for Mac: ConvenienceWare Ghost Reader

- Mac only text reader
- Listen to text in language of choice
- Export iTunes
 - Convert electronic text to an audio file
- \$39.95 (one language)
- High quality voices
- Text highlighting
- Point and read feature
- www.assistiveware.com



Page 23

Scan and Read Software Programs

In general:

- Scan print materials into the program
- Read most any e-text format
- Usually include study tools - highlighting, voice notes, sticky notes, bookmarking, annotation extraction, talking dictionary and spell check, graphic organizers, homonym support, etc.
- Include talking word processor and word prediction
- General cost between \$300-1500



Page 24

Scan and Read Programs

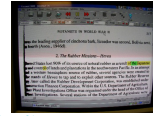
- Scan and Read Pro; (\$150 – Windows only)  www.readingmadeez.com/home.html
- WYNN Wizard; (\$995 – Windows only) www.freedomscientific.com 
- ClaroRead; (\$195-\$395) www.enablemart.com 
- Kurzweil 3000; (\$1,495) www.kurzweilededu.com 
- Read & Write Gold; (\$645) www.texthelp.com 

Page 25



Where to Find Audio Books

- Internet
- Local Library
- Purchase
- Text to Audio conversion



Page 26



Audio Books from the Internet

- www.librivox.org (FREE)
 - downloadable mp3 or ogg files.
- www.podjbooks.com (FREE)
 - Audio books delivered to your podcatcher
- www.audible.com (Subscription fee)
 - Over 50,000 titles available for download
- www.amazon.com (fee)
 - Over 670,000 Titles in CD, MP3, downloadable formats
- iTunes (fee)
 - Audiobooks and Podcasts



Page 27

*See the Resources for Digital Literature handout



RFB&D Membership

- Person must have certified print disability
- Individual or institutional memberships available
- Different membership levels/costs
- Daisy audio books on CD or downloadable
- Many textbooks available
- For more information contact:



Membership Services: 800-221-4792

Website: www.rfbd.org

Page 28



Portable Players



- Amazon Kindle 2; (\$359) www.amazon.com/Kindle
 - Supports e-text or audio book files from Amazon
 - **Text to speech enabled if publisher allows it**
 - Does not support Daisy format
- Mp3 player (\$25-\$400)
 - Does not support Daisy format
- iPod (\$50-\$400)
 - Does not support Daisy format

Page 29



Portable Daisy Players



Provides audio supports for DAISY format.

- Victor Reader Classic; (\$240) www.humanware.com
- Victor Reader Stream; (\$329) www.humanware.com
 - Supports electronic text file formats
- ClassMate Reader; (\$479) www.humanware.com
 - Supports electronic text file formats; visual text display
- Telex Scholar Portable Player; (\$199) www.telex.com

*See Comparison Chart for Talking Book Players

Page 30



Start-To-Finish Books

- **Computer books** with highlighted text accompanied by human narration
- Topics appropriate for elementary, middle school and older readers reading below grade level
- Literacy Starters, Gold & Blue levels
- Blue level has fluency reading practice
- Price: \$70/book or \$139/book for Literacy Starters
- Vendor: Don Johnston, www.donjohnston.com



E-Text Resources

- **ClipRead**
 - By Live Ink
 - www.clipread.com or www.liveink.com
 - Version 1.0 Price: \$89.95 annual subscription
 - Version 2.0 currently in Beta testing; free to download
 - Electronic parsing reformats text into word groups that augment comprehension.

Live Ink® Technology's

Live Ink® Technology's cascading format makes online reading easy, comfortable, and enjoyable.

ClipRead™ with Live Ink Technology instantly converts text so, no matter your reading level, you can quickly grasp the meaning of complicated passages and accurately recall what you have read.

what you have read.

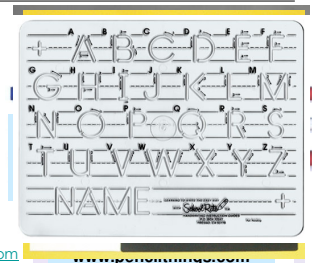
Writing Tools



Low Tech Writing

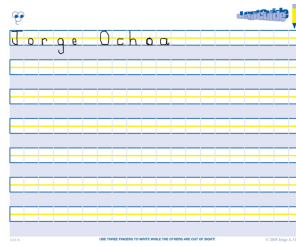
- Pen & Pencil Grips .50-\$2
- Large grip pens & pencils
- Colored pens and pencils
- Pencil grade: soft-hard
- Adapted Pens & Pencils
- Writing Guides & Stencils

- Resources
 - www.otideas.com
 - www.school-rite.com
 - www.beacon-ridge.com
 - www.onionmountaintech.com
 - www.pencilwriting.com



Low Tech Writing

- LegiGuide paper \$12 www.legiguide.com
- Stage Write Raised Line Paper \$3-5 www.theraproducts.com
- Colored Paper
- Handwriting Page Maker <http://www.members.thebigbus.com/resources/writing/index.htm>
- Slant Boards –price varies \$17 up
- Arm Supports & Stabilizers, such as the Ergorest, Elbow Anchor from Rifton



Dictionaries & Spellers

Medium Tech

- Webster's Speaking Dictionary & Thesaurus (\$80; www.franklin.com)
 - Features: 120,000 words, phonetic spell correction, grammar guide, etc.
- Ginger Software
 - Free download of Beta trial on internet
 - Commercial version will be available mid 2009
 - Current available features: corrects unusual spelling mistakes, and misused words.



Note Taking Aids Medium Tech

- Digital Voice Recorder
 - \$25 and up
 - Some have computer transfer ability
 - Hold over 100 hours of recording time
- Pulse Smart Pen by Livescribe
 - 1G/\$149; 2G/\$199
 - Requires special paper and refill cartridge
 - The pen links the recording to the notes written by the student.
 - <http://www.livescribe.com/>



Students can use voice recorders as a backup when taking notes in class.

***Need to get permission to record.**

Page 37

Portable Notetakers Medium Tech

- Neo & Dana By AlphaSmart
 - Price: \$225/\$425
 - Dana has palm OS
 - Neo has option to add Co:Write
 - www.alphasmart.com



- Fusion By Advanced Keyboard
 - Price: \$239 basic
 - Text to Speech/Word Prediction version \$369
 - www.writerlearning.com



Page 38

Keyboarding Medium Tech

- Alternative Keyboards
 - Key guard
 - Large print
 - Large keys
 - Color-coded
 - ABC layout
 - OnScreen Keyboard
- Color Coded Keyboard Labels
 - www.hooleon.com \$15-17



Page 39

Keyboarding Software Medium Tech

- **Type to Learn Jr.** by Sunburst
 - \$30; www.sunburst.com
 - Teaches key location; not touch typing method
- **Type to Learn 4: Agents of Information**
 - \$80; www.sunburst.com
 - Touch-typing instruction for K-12
- **2Type by 2Simple**
 - \$33; www.2simple.com
 - Tutorial activities and games can be adjusted for speed
 - Timed activities can be shut off
 - Large print and graphics
 - Instructions can be spoken out loud.



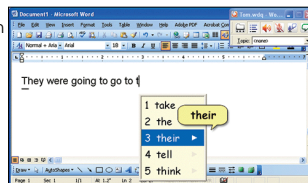
Page 40

Word Prediction High Tech

Word prediction can help students who struggle with spelling, grammar, sentence structure, and those with very slow typing speed.

- Co: Writer SOLO by Don Johnston
 - \$325; www.danjohnston.com
 - Platform: Mac or Windows

- WordQ by Quillsoft
 - \$225; www.wordq.com
 - Platform: Windows only

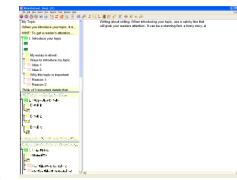


Page 41

Talking Word Processors High Tech

Talking word processors read text out loud by letter, word, sentence using a computer voice. Students can listen to the text to check for errors in grammar and spelling.

- Write:Outloud SOLO by Don Johnston
 - Price: \$99
 - Platform: Mac or Windows
 - www.danjohnston.com
 - Built-in Franklin Phonetic spell checker & dictionary



Various text-to-speech programs can be used as talking word processors (Read Please, Text Aloud, Natural Reader – see Reading section of handout)

Page 42

Symbol Supported Word Processors High Tech

- Clicker (\$229)
 - www.cricksoft.com
- Pix Writer (\$295)
 - www.slattersoftware.com
- SymWriter (\$)
 - <http://www.widgit.com/products/symwriter/index.htm>

Most have text-to-speech
Some switch accessible

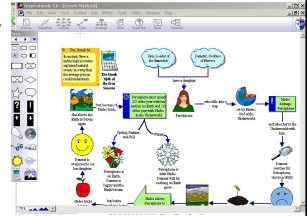


Page 43

Mind Mapping Software

Graphic organization tools that assist with the pre-writing process, brainstorming, concept mapping, organizing, outlining

- Inspiration by Inspiration (\$70) www.inspiration.com
- Draft:Builder by Don Johnston (\$150) www.donjohnston.com
- Bubbl – concept mapping tool www.bubbl.us; (free) web-based
- Spark Learner - www.spark-space.com free trial



Page 44

Speech Recognition High Tech

Speech recognition software converts spoken word into text. Can help students who struggle with written expression.

- Dragon NaturallySpeaking
 - Price: \$100-1000
 - Platform: Windows
 - Preferred vs. Professional
 - www.nuance.com

- MacSpeech Dictate
 - Price: \$199
 - Platform: Mac
 - Powered by Dragon's Speech engine.
 - www.macspeech.com

- SpeakQ by Quillsoft
 - Price: \$350 w/ WordQ 2
 - Platform: Windows
 - www.wordq.com

- VISTA OS Speech Recognition
 - Free with VISTA
 - Found in Control Panel



Page 45

Computer-based Worksheets & Tests

These programs enable students to fill out worksheets and take tests on the computer.

- TestTalker by Freedom Scientific
 - \$399; www.freedomscientific.com
 - Offers AT&T speech synthesizer. Supports True/False, Multiple Choice, Fill-in, and Extended Answer.
- Kurzweil 3000 by Kurzweil
 - \$1500; www.kurzweil.edu.com
 - Offer fill in the blank features. High lighters for identifying answer, text-to-speech.



Page 46

Scanning & Form Filling Software

- Foxit Reader 3.0
 - Free-\$30; www.foxitsoftware.com
 - PDF reader with text, highlight and notes tools available in free version
 - Foxit PDF Editor (\$99)
- Nuance Imaging Software: www.nuance.com
 - OmniPage 17 (\$140-500)
 - Scan and convert documents and files
 - PaperPort 11; (\$99-199)
 - Allows form filling in PDF files
 - Convert PDF files to text files; does not maintain original formatting
 - PDF Converter 5; (\$49-99)
 - Convert PDF files into Microsoft Office documents
- FormPilot for Mac
 - \$20-90; <http://www.colorpilot.com/formmac.html>
 - Allows form filling in PDF files



Page 48

Online Writing Resources

- Writing Fix – interactive writing prompts
 - www.writingfix.com
- Read, Write & Think
 - www.readwritethink.org
- Lee's Summit Technology Integration
 - <http://its.leesummit.k12.mo.us/writing.htm>
- Online Keyboarding Practice
 - <http://its.leesummit.k12.mo.us/keyboarding.htm>

Page 48

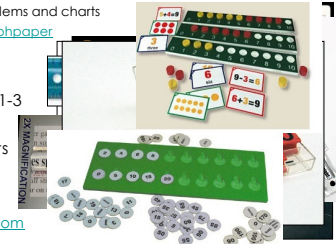
Technology Tools for Math



Page 49

Low Tech Tools for Math

- Math Grids for creating problems and charts
<http://incompetech.com/graphpaper>
- Easy grip math tools
- Rulers with Magnification
Raised Lines, large print \$1-3
- Number Stamps \$10
- Number Line Assembly Kits
- Resources:
www.beacon-ridge.com
www.educationalinsights.com
www.maxiaids.com
www.attainmentcompany.com



Compass/Ruler

Page 50

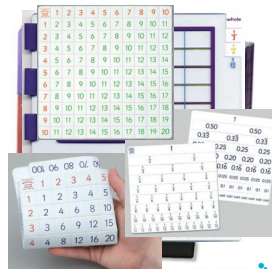
Low Tech Tools for Math

- Fraction Manipulatives
- Measure Lines
- Decimal Cubes
- Master Fraction Set
- Math fact tables

Combine low tech tools from reading, writing and math categories for more options

Resources:

- www.beaconridge.com
- www.attainmentcompany.com
- www.onionmountaintech.com



Page 51

Calculators

Medium Tech

- Large button and display calculator
– \$2 and up
- Talking calculators
– \$10 and up
- Sci-Plus 300 Large Display Talking Calculator (\$325)



Resources:

- www.enablemart.com
- www.independentliving.com

Page 52

Calculators

Medium Tech

- T1-15 Explorer Calculator \$21
www.onionmountaintech.com
Shows fractions and mixed numbers as students would write them.



- Money Calculator \$25
www.attainmentcompany.com
Buttons designed like money, teaches money values with two learning games.



Page 53

Virtual Calculator

High Tech

Calcu-Scan

- By Mayer Johnson
- Price: \$89
- Platform: Windows
- Virtual calculator with 10 layouts, switch, dwell, keyboard accessible, speech output, integrated math problem display and scoring
- www.mayer-johnson.com

Problem # 1

Lance earned \$113.75 for 13 hours of work. How much money did he earn each hour?

\$ _____



Page 54

Create & Solve Worksheets



High Tech

MathPad Plus

- By Intellifools
- Price: \$100
- Platform: Win/Mac
- Cambiumlearning.com

Virtual Pencil Arithmetic & Algebra

- By Hentermath (\$199 & 399)
- Spoken interface for blind and visually impaired students.
- www.hentermath.com

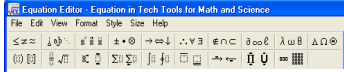
Page 55

Math Symbols in Microsoft Office

High Tech

Microsoft Office Equation Editor


- Create math equations in Microsoft Office using Equation Editor toolbar. Built in Microsoft Word.



MathType6.5

A powerful commercial product that extends the capabilities of Equation Editor. Price: \$97

<http://www.dessci.com/en/products/mathtype>

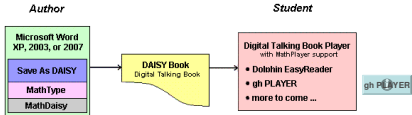
Page 56 


High-Tech Tools: Daisy Accessible Math

MathDaisy; (\$97-179)

<http://www.dessci.com/en/products/mathdaisy/>

- Process:




Page 57 

gh PLAYER

- Standard & Premium editions (\$150 & \$250)
- <http://www.gh-accessibility.com/>
- Digital book player supports:
 - NIMAS
 - Plain Text (.txt)
 - DAISY 2.02
 - ANSI-NISO (Z39.86-2002)
 - DAISY/NISO 2005 (Z36.86-2005)
 - **MathML-enabled NIMAS and Digital Talking Books**

"The gh PLAYER™ fully supports MathML-extended NIMAS and Digital Talking Books with character-by-character navigation, fully anti-aliased display, and up to 16x zoom."

Page 58 



gh PLAYER; (\$150-\$250)
<http://www.gh-accessibility.com>

Page 59

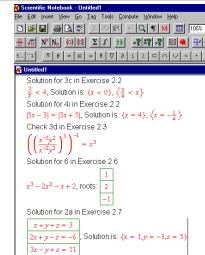
Math Creation Software


Scientific Notebook

- Tool for creating complex mathematical documents with graphics, algebra, calculus, and more.
- \$99; www.mackichan.com

Math Talk

- Combines Scientific Notebook with Speech Recognition for voice input of complex math computation.
- \$300; www.metroplexvoice.com

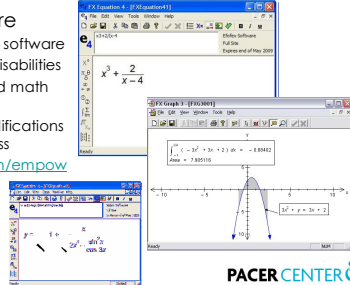


Page 60 

Math Creation Software

Efofex Math Software

- Equation, Graph, Draw software
- Free for students with disabilities who can't use standard math tools
- Check website for qualifications and application process
- <http://www.efofex.com/empower.php>



Page 61

Contact Information

- Tara Bakken
 - PACER Center's Simon Technology Center
 - 952-838-9000
 - tara.bakken@pacer.org
- Simon Technology Center
 - stc@pacer.org
 - www.pacer.org/stc

Page 62

Thank You for Coming

- This webinar will be archived (saved and posted on the website <http://www.pacer.org/pacerwebinars/>; file is too large to send via email)
- **Please take a minute to fill out the evaluation** at the conclusion of the webinar; it will appear automatically when you exit the Webinar
We appreciate it!

Have a wonderful day!

Page 63