



Assistive Technology: Tools to Support Learning

- An overview of AT options that can help students learn
- Strategies for discussing AT options with school teams

How We Will Zoom Today

- Participants will be muted
- Please use Chat to say “hello” and what agency you are from, and/or if you are a parent, the age(s) of your child(ren)!
- Questions? Use the Q&A feature
- I encourage you to add additional information into the chat as well- we are here to learn from each other.
- **A PDF of the presentation will shared with all attendees** as well as additional information and resources

Quick Poll



CHAT: reply to all panelist and attendees



Parents Helping Parents

Parents Helping Parents supports, educates, and inspires families and the community to build bright futures for youth and adults with special needs.

Information, Support & Education

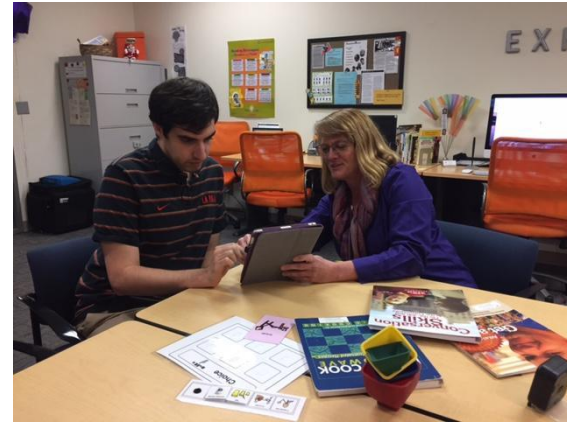
- 1:1 service - calls & emails
- Webinars & Support Groups
- E-Learning Library
- Calendar of Events
- Resource Directory
- Assistive Technology Center – iTECH Center



Parents Helping Parents - iTech

- Techsplorations = Tech exploration... for:
 - Infant & Preschoolers* (TIP)
 - Elementary, Secondary and College Students
 - Adults & their Providers* (TAP)
- Information and Referral
- Trainings and Consultations
- Toolkits for Loan - on hold during pandemic
- “Dr. Mike” – Toy Doctor

* vendorized by San Andreas Regional Center

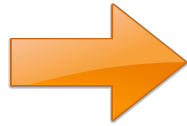


We serve all ages, all disabilities!

www.php.com/assistive-technology



AT Consideration



Define Assistive Technology = AT

AT Tools - for students with learning difficulties

AT Consideration Process Overview

Learning Objectives

1. Increase understanding of AT and how it can help
2. Increase knowledge of AT tools, services and resources
3. Understand how to initiate the discussion of AT with school teams

What is Assistive Technology (AT)?

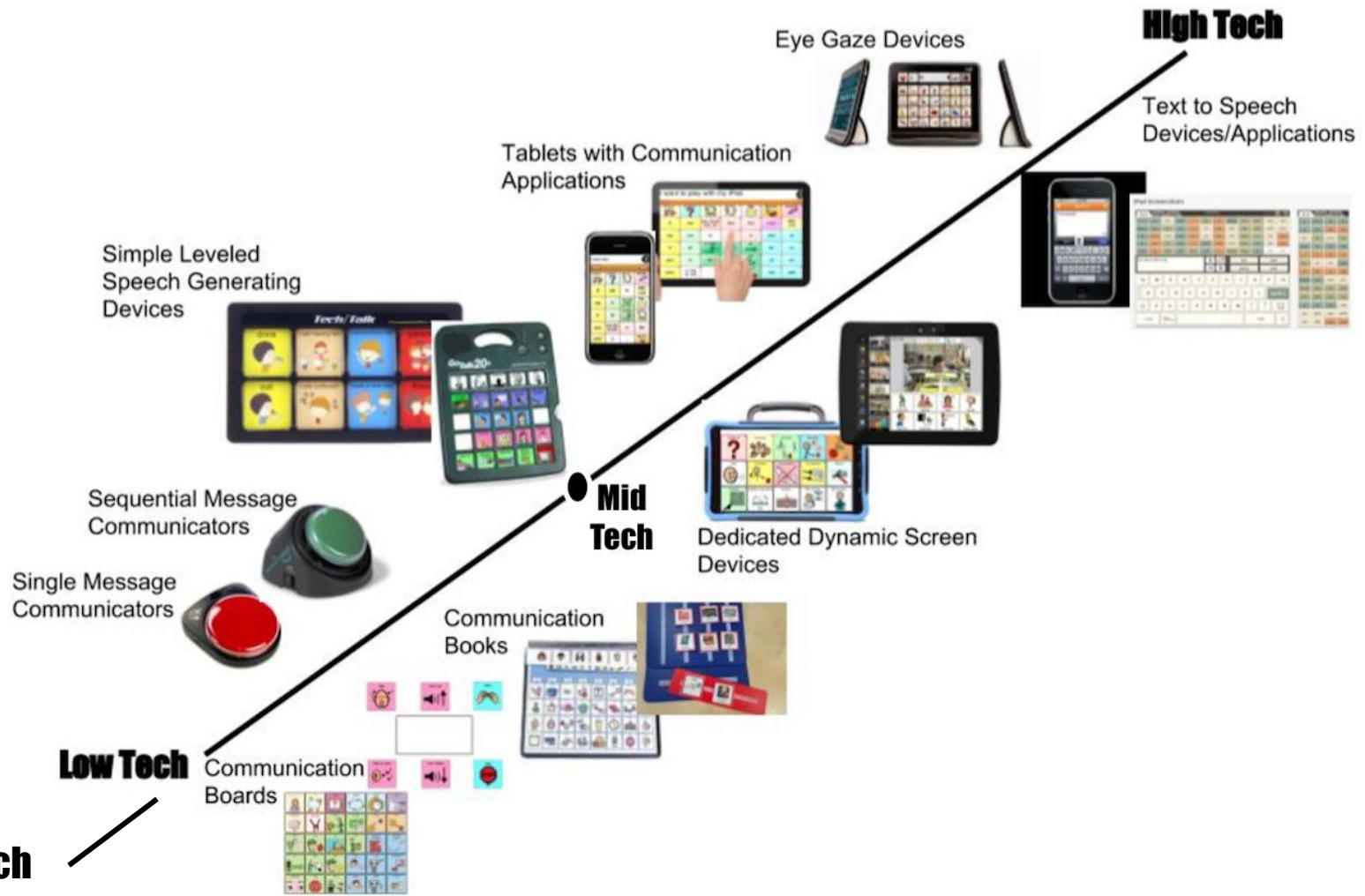


No Tech

Low Tech

Mid Tech

High Tech



What is Assistive Technology?

- AT Device:

- Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified or customized, that is used to **increase, maintain, or improve functional capabilities of a child with a disability**. The term does not include a medical device that is surgically implanted, or the replacement of that device.”[20 USC §1401(1)(2)34 C.F.R. 300.5].

- AT Service:

- any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device. [20 USC §1401(1)(2)34 C.F.R. 300.6].

What is Assistive Technology?

AT Service:

1. Evaluation of the needs of such child, including a functional evaluation of the child in his or her customary environment;
2. Acquisition of AT
3. Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, replacing
4. Coordinating - therapies, interventions, or services with AT use
5. Training or technical assistance -> student
6. Training or technical assistance -> professionals, employers, or others

AT “assists” a student with:

- Reading and Writing
- Math
- Communication
- Computer Access
- Study Skills
- Social Skills
- Organization and Planning
- Mobility
- Vision
- Hearing

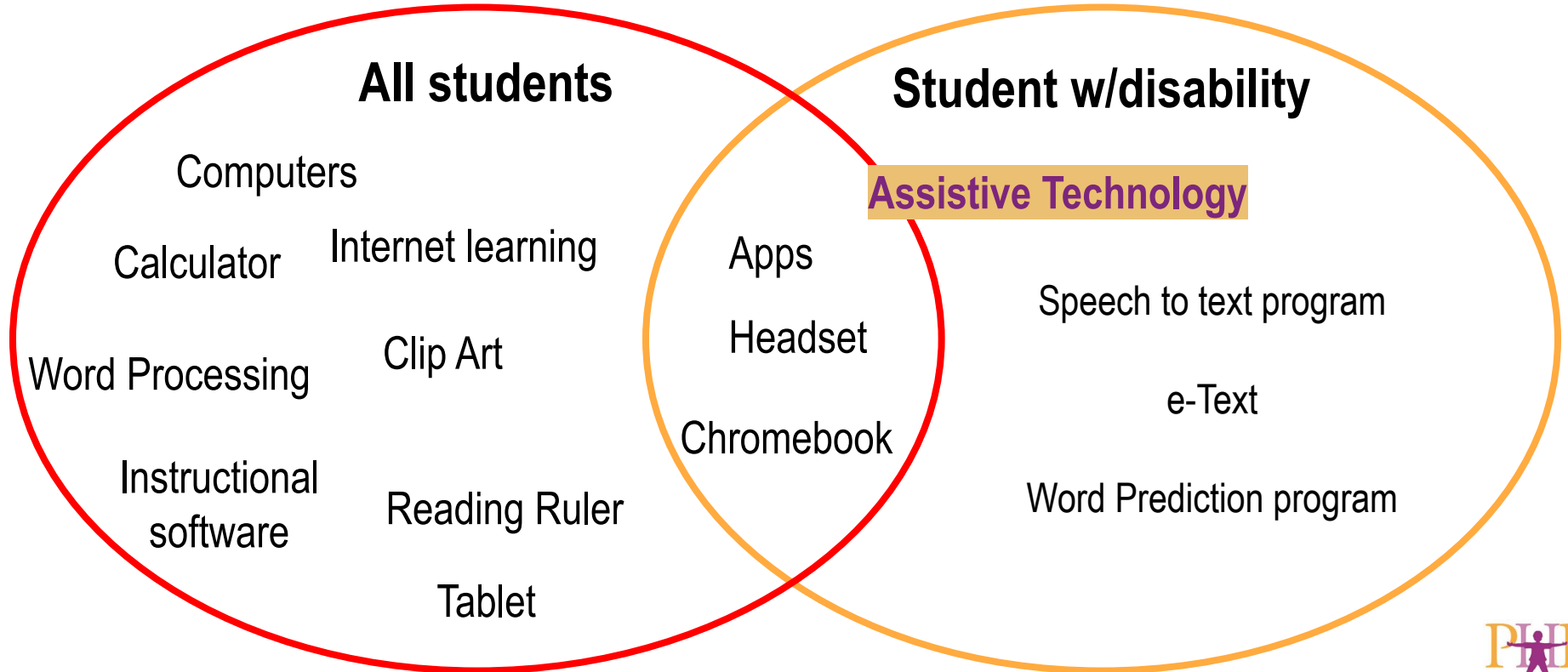


AT... other possible outcomes:

- Access to learning
- Address learning gap
- Engagement
- Self esteem
- Independence
- Interaction with peers
- More moments of success



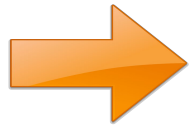
Educational Technology vs. Assistive Technology





AT Consideration

Define AT



AT Tools - for students with learning difficulties

AT Consideration Process Overview

AT for Communication: Low/Mid Tech

Speech
Button



Portable
Books



“GoTalk
Now”+iPad
App



www.attainmentcompany.com

AAC High Tech



Visit for training videos —> <https://www.assistiveware.com/products/proloquo2go>



🔍 Search by Keyword

- ☰ App Lists
- 💬 Review Status ▾
- 🗉 Category ▾
- 👤 Age ▾
- 💰 Price ▾
- 🧩 Skill ▾
- 📖 Common Core ▾
- 🎓 Grade Level ▾
- 📱 Mobile Device ▾



iTalk Recorder

★★★★★ \$0.00



AutismXpress

★★★★★ \$0.00



AutismXpress Pro

★★★★★ \$1.99



Pictello

★★★★★ \$19.98



Conversation

★★★★★



iRewardChart:
Parents Reward

★★★★★ \$0.00



Proloquo2Go -
Symbol-based AAC

★★★★★ \$249.99



Avaz Pro - AAC App
for Autism

★★★★★ \$199.99



PandaPal (AAC)
Application for iPad

★★★★★ \$0.00



PandaPal - A
Communicator

★★★★★



Answers:YesNo



Sono Flex Lite



i Create... Social Skills
Stories



Sono Flex



Toca Store

<https://www.bridgingapps.org/>

AT for Reading: Low Tech

Highlighting Tape

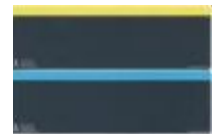
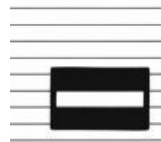
Reading Rulers

Magnifying Bars

Colored Overlays

Page magnifier

Reading Guides



AT: High Tech

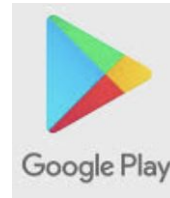
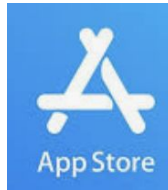
Many Options in Many Areas

Extensions - web based programs that work through your browser. Typically requires you to create an account with the vendor to log in for use. It can add special functions and tools to your web-based browsing, word processor, presenting, organizing, planning, etc..



Apps or Applications - tablet/phone/computer-based programs that perform specific functions and can be acquired through an App Store, Google Play, +

Software - refers to a program that is downloaded to a computer and runs off the hard drive. This technology is phasing out.



AT: High Tech

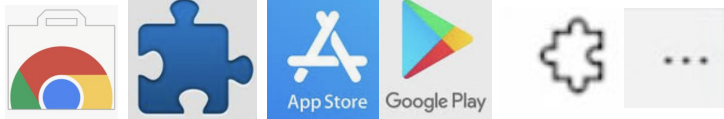
Many Options in Many Areas

- Reading
- Writing
- Spelling/Grammar
- Notetaking
- Studying
- Comprehension
- Planning

& more



Basic
or
Feature
Filled

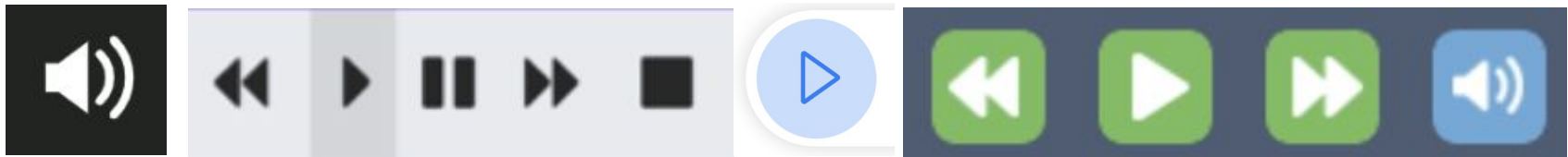


AT for Reading - check the settings

- **F O N T** Font **Font** *Font* **FONT**
- **COLOR**
- **colored backgrounds for contrast**
- highlight
- Adjust print **size** / spacing

AT for Reading: Built-in Text To Speech (TTS)

- Computer, Phone, Tablet operating systems
- Through applications -
 - Google Suite - Docs, Sheets, Slides
 - MS Office 365 - Word, Power Point, Lens, +
- Browsers - Safari (Speech ->Start Speaking), Chrome (ChromeVox = ext Screen Reader), Edge (Immersive Reader)



AT for Reading



Text to Speech (TTS) &
Highlighting (single or dual)

- Reading aloud, paired with dual highlighting improves reading comprehension.



AT for Reading: Built-in TTS & more



Immersive
Reader

The screenshot shows the OneNote application window titled "School". The ribbon includes "Home", "Insert", "Draw", and "View". The "View" ribbon has options for "Navigation Panes", "New Window", "Immersive Reader", "Page Color", "Rule Lines", "Deleted Notes", "Translate", "Check Accessibility", and "Replay". The left sidebar shows a navigation pane with categories: English, Math (selected), History, Science, and Geography. Under "Math", the following items are listed: Order of operations, Solving Linear Equations, Word problem, Solution Steps (selected), Distance between points, Factoring, and Exponents. The main content area displays the "Solution Steps" document, dated Tuesday, July 3, 2018, at 3:27 PM. The document contains the quadratic formula:
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
 and the following steps: "Use the distributive property to multiply 2 by 2x+5. 4x+10=4x+10", "Subtract 4x from both sides. 4x+10-4x=10", "Combine 4x and -4x to get 0. 10=10", "Compare 10 and 10. true", and "This is true for any x. x ∈ ℝ". At the bottom of the window, there are buttons for "+ Section" and "+ Page".

Reading Math in OneNote:

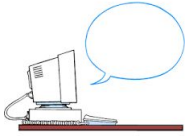
AT for Reading - TTS + Extensions, Apps, Software

Comprehensive:

- Snap&Read (ext)
- Read&Write (ext)
- Kurzweil 3000
(ext/software)
- WordQ (ext)
- Voice Dream
Reader (iOS)

Basic:

- Natural Reader (ext)
- ClaroRead (iOS)
- Dolphin (iOS/Andr.)
- ReadAloud (ext)
- Web Reader (ext)
- Screen Reader (ext)



AT for Reading - List of Literacy Tools

Most Common:

- Read Aloud
- Highlighting (Dual/Single)
- Fonts (e.g. Dyslexie)
- Spacing
- Color filters/Masking
- Dictionary/Picture Dictionary
- Page Simplification
- Translation
- Audio Maker

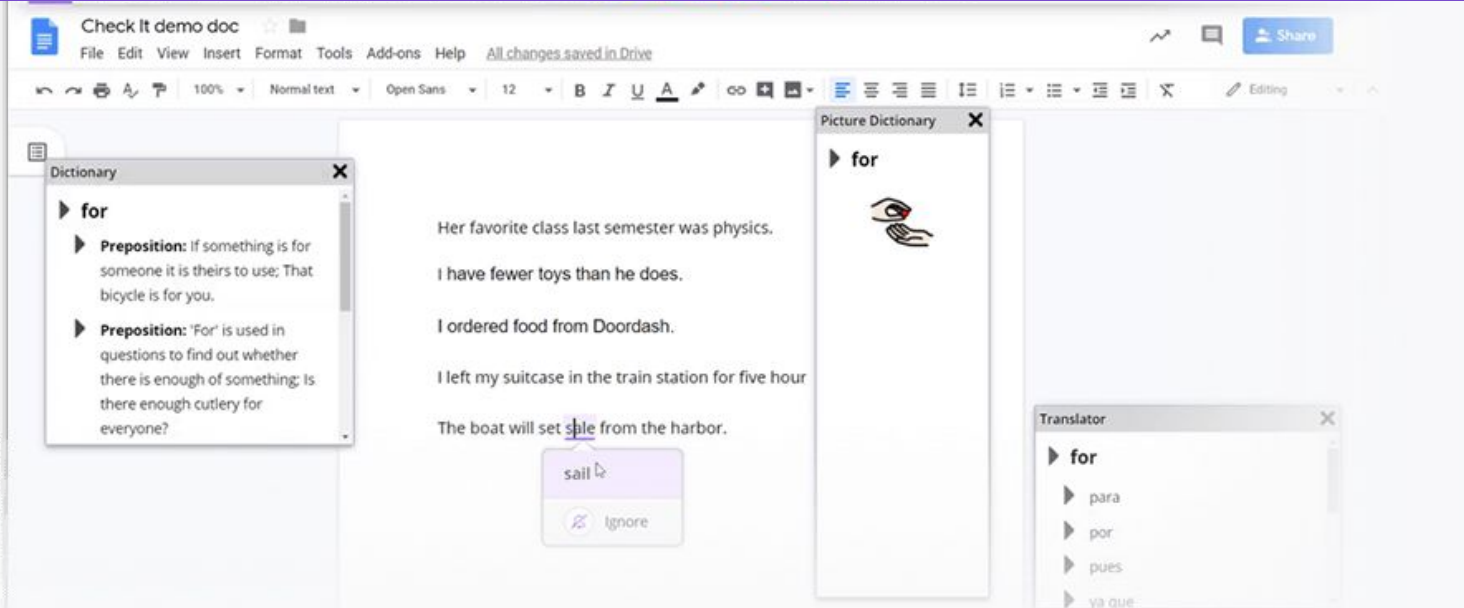
Other:

- PDF/Screenshot Reader
- Text Leveling
- Note-taking; Templates
- Bibliography Maker
- Annotation
- Word Prediction
- Dictation
- Teacher Tools/Data Collection
- Scanning
- Web/Desktop/Tablet

AT for Reading - High Tech Full Featured



Combo w/ writing support too



AT for Reading - High Tech Full Featured



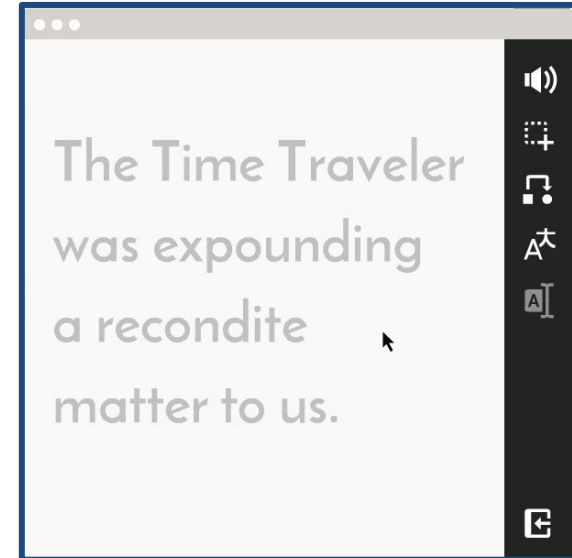
DON·JOHNSTON
Human Learning Tools

Snap & Read

Read aloud tool



Text leveling tool:



e-Text

Must have a documented print disability to access these...



www.learningally.org

- Membership requirement
 - Print Disability*; Reading Disorder
- Subscription Fee
- Primary format
 - **Human Narration** Audio
 - VOICEtext
- Platforms
 - Computer, iOS, Android, Chrome, Devices
- Other
 - Free software/mobile apps
 - Dyslexia resources/webinars



www.bookshare.org

- Membership requirement
 - Same
- **Free**
- Primary format
 - Computerized Voices
 - Daisy, HTML, Text, Braille
- Platforms
 - Same
- Other
 - Free “Read Now” Web Reader
 - Tablet app (fee)

*Print Disability: Learning, visual or physical disability
ADD or Intellectual disabilities *alone* do not qualify



e-Text

Other Sources

Public Domain - epubbooks.com; bookbub.com; manybooks.net;
wikibooks.org; gutenberg.org; justfreebooks.info; books.google.com

Subscriptions - Audible, Scribd, Audiobooks.com, Book Riot

Library - Public, College, [Open Library](#)

- [Access via Hoopla, Libby, Overdrive](#), +

YouTube channels: [Ccprose](#), [Audio Books](#), [Greatest AudioBooks](#), +

& more



AT for Writing - Low Tech

Pencil Grips

Adapted Implements

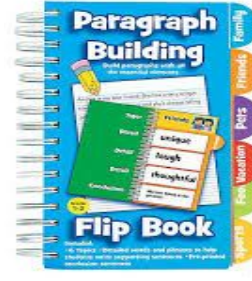
Specialized Paper

Writing Grids

Slant boards

Page-Up

Paragraph Building Flip Book



www.amazon.com

www.enasco.com

www.attainmentcompany.com/



AT for Writing

High Tech solutions available

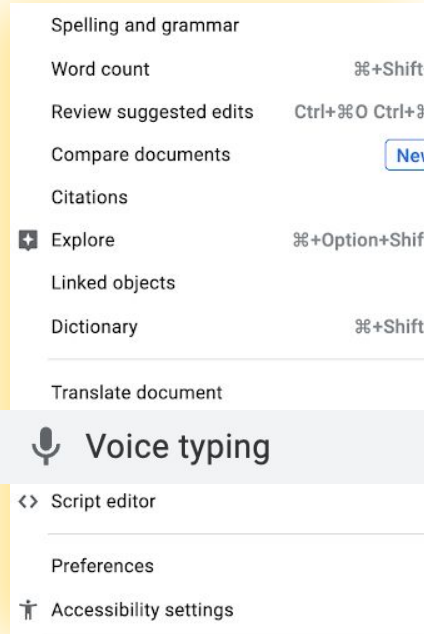
Does your student struggle in these areas?

- Handwriting/Typing
- Fine Motor
- Spelling and Grammar
- Vocabulary
- Expression
- Organization
- Note-Taking
- Memory



AT for Writing - Built-in Speech to Text (STT)

In Chrome/Docs/Slides find tab: “Tools”



In the drop down menu,
Click on
“Voice Typing”



AT for Writing - High Tech

Spelling & Word Prediction

Spelling & Grammar

- Grammarly ext
- Ginger ext
- Virtual Writing Tutor (free web)

Built-In Spelling:

- MS 365 learning tools
- Google Suite
- Apple products
- AI (Siri/Alexa)

Smart Word Prediction*:

- Co:Writer
- Read&Write

* **Smart Word Prediction** considers the context/subject of the writing when making suggestions. It's different than word completion that is built into many devices.



AT for Writing - High Tech Full Featured

Smart word prediction at work:

Abraham Lincoln was elected president

- 1: elected
- 2: a
- 3: elected president
- 4: elected to
- 5: not
- 6:

Dictation = Speech to Text

Use with Text to Speech

- to self check what was written

Let's suppose you ri

- 1: write
- 2: ride
- 3: rip
- 4: right
- 5: right now
- 6:

Flexible spelling word processing

- identifies phonetic and inventive spelling

AT for Writing - High Tech Full Featured



Combo w/ reading support too

A screenshot of a Microsoft Word document titled 'Check It demo doc' with several read&write overlays. The document text includes: 'Her favorite class last semester was physics.', 'I have fewer toys than he does.', 'I ordered food from Doordash.', 'I left my suitcase in the train station for five hour', and 'The boat will set sple from the harbor.' A 'Dictionary' window is open on the left, showing definitions for 'for'. A 'Picture Dictionary' window is open on the right, showing an image of an eye and the word 'for'. A 'Translator' window is open at the bottom right, showing translations for 'for'. A context menu is visible over the word 'sple', offering 'sail' and 'Ignore' options.

Built-in Learning Tools



Microsoft + Made by Dyslexia:
Helping students with dyslexia thrive
with technology

Built-in supports designed with
Dyslexia in mind but
can help all types of learners.

Learning Tools are available in the products you already use

Free and easy to use. Learning Tools are available in Word, Word Online, OneNote, OneNote Online, Outlook Online, and Microsoft Edge.



Features:

- Enhanced dictation – improves authoring text
- Focus mode – Sustains attention and improves reading speeds
- Immersive reading – improves comprehension and sustains attention
- Font spacing and short lines Improve reading speed by addressing “visual crowding”
- Parts of speech – supports instruction and improves writing quality
- Syllabification – improves word recognition
- Comprehension mode – Improves comprehension by an average of 10%

MS Immersive Reader -

<https://www.microsoft.com/en-us/microsoft-365/blog/2016/11/10/immersive-reader-and-frame-guide-come-to-office-lens-offering-built-in-accessibility/>



AT Built-in Accessibility

Chrome & Chromebook built-in Accessibility tools



Tech Toolkit for Families
and Guardians:
Accessibility

Google for Education

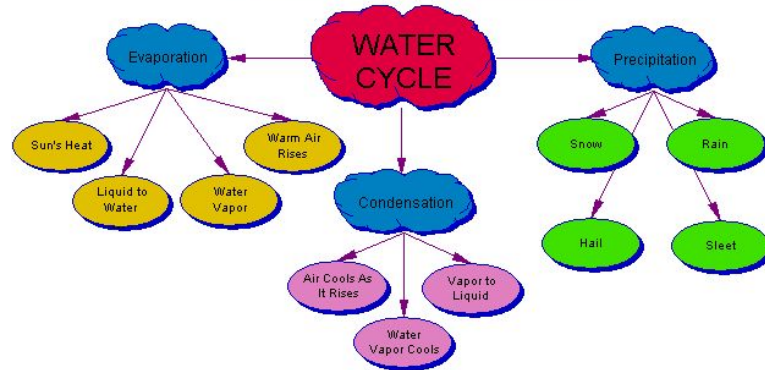


AT for Writing

Plan & Organize

The Process:

1. Visualize
2. Plan
3. Organize
4. Write
5. Present



AT Options:

[Inspiration](#)
[Kidspiration](#)
[Mindomo](#)
[Lucid Chart](#)
[MindMup](#)

AT for Writing

Plan & Organize

Calendars *

- Google
- iCal
- AnyDo
- DigiCal

Personal Assistant *

- Google Home
- Google Assistant app
- Alexa
- Siri

* Pair AT with training of appropriate **“strategies”** & **“routines”**

Write things down, make lists, set alerts/reminders,
Develop habit of checking calendar, list, +

AT for Writing

Notetaking

Independent option:

High Tech - w/ audio recording

(active learning)

- Livescribe Pen
- Sonocent/Glean
- Notability
- GoodNotes

Dependent option:

- Peer note taker
(Passive learning)

Pair AT with training of appropriate **“strategies”** & **“routines”**

Ex: Use a system of notation on your notes to mark special/important aspects. Review notes within 48hrs. Transcribe notes into a study sheet. Abbreviations. Plan out regular review sessions (notes/book). Pomodoro method. Use a pen.

AT for Writing - Notetaking

Accessories:

- Paperlike screen protector - screen cover for iPad
- Digital pencil
- Grips - various shapes & textures

Notetaking Strategy ideas:

- Color coding system
- Codes for abbreviations
- Organization systems for notes
- ... many more

AT for Writing - Assignment Calculator

UNIVERSITY OF MINNESOTA

Give it a Try - select your type of assignment: **Plan Your Assignment**

- [Research Paper](#)
- [Speech](#)
- [Lab Report](#)

Start Date *

Due Date *

04/03/2020

Calculate

MM/DD/YYYY (e.g. 12/31/2020)

[Sign in](#) for due date notification options

1: Understand assignment. Select topic.

Note: The research and writing process is not always linear. Keep in mind you may need to go forward or backwards.

- [Read through and understand your assignment](#) (from UNC).
 - Contact or visit your instructor's office hours with questions.
- [Select a workable topic](#) (from Colorado State).
- Conduct preliminary investigation into topic using Google or other web searches. Work to understand your topic and the issues surrounding it.
 - [Try a specialized encyclopedia.](#)

Checkout the
Assignment
Calculator at

SJSU



AT for Math: Low/Mid Tech

Fraction Calculator



Coin-u-lator



Coin Abacus



Color-coded rulers



Talking Calculator

Math
AT Tools

High-Tech
Options



ck-12



Math – High Tech

Software, Apps, & Websites

Subtract:



$$10 - 6 = \square$$

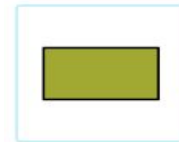
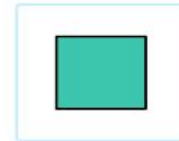
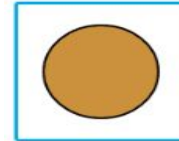
Look at these coins:



Which group shows the same amount?



Which of these is a circle?



AT for Math

Math TTS:

- **MathTalk** - TTS, speech recognition for math
- **Mathshare** - TTS math notation, explain problem solving steps

Specialized Calculators:

- **Desmos** - graphing calculator **Geobra** - online graphing, 3D imaging
- Fraction Calculator Plus, Talk Sci Calc

Photo -> digitize Math

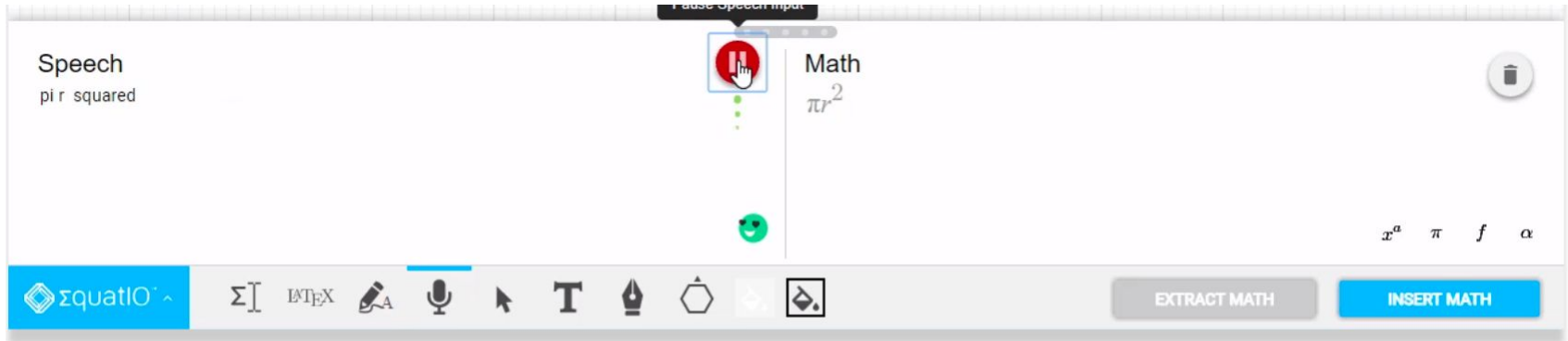
- Microsoft **Math Solver** - finger draw or type
- **Mod Math** - on screen calculator keypad

AT for Math



- Comprehensive support tool
- UDL option

free for teachers!



TextHelp's YouTube Channel - EquatiO's Playlist of Instructional Videos

<https://www.youtube.com/playlist?list=PLvSZbmGbKpCRz3o-FmU9AkEpURs9-Z0nH>



Math Apps for Tablets

- Arithmetic
- Specialized Math Paper
- Calculators
- Algebra & Calculus
- Graphing support
- Money
- Time
- Etc.



AT for Sensory Needs



Noise-cancelling
headphones



Wedge Cushion



Fidgipod

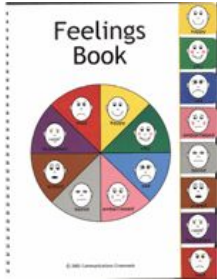


Compression Vest



Weighted Lap Pad

AT for Social Skills



Feelings Book

www.commxroads.com



A bully does mean things. A bully might call me names or say things that make me feel bad. A bully might push me or trip me up. A bully might also grab my things or try and get people to laugh at me.

Social Stories

www.nlconcepts.com y

www.amazon.com



Conversation Starters

Apps!!





Key Takeaways - AT Tools

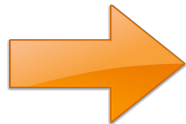
- For student access to learning, AT for Reading, Writing, Spelling, Notetaking, Organization, Planning, Math, & more can be considered.
- Consider what strategies & support should be paired with the AT.



AT Consideration

Define AT

AT Tools



AT Consideration Process Overview

Effective consideration process to meet students needs for assistive technology





School Age Children

- **IDEA***. In developing each child's IEP, the IEP Team **must consider** whether the child needs assistive technology devices and **services**.
- **Section 504 of the Rehabilitation Act of 1973**: Students on a 504 plan may also be entitled to AT as a reasonable accommodation.

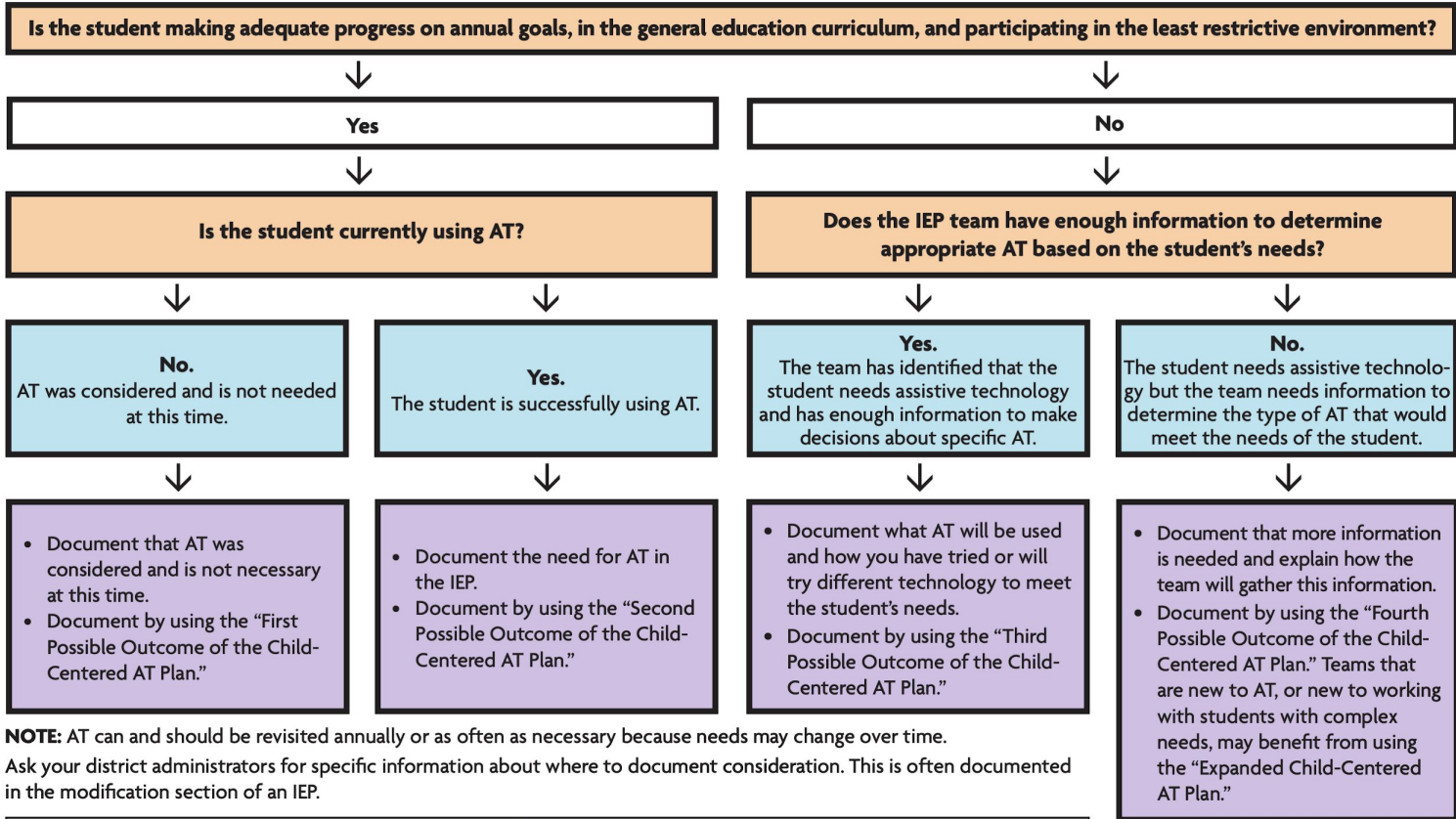
*Individuals with Disabilities Education Act [§300.324(a)(2)]

Which AT is the right one?

- Student's "needs" & "goals"
- Knowledgeable input for recommendations
- Research
- AT Assessment recommendations
- AT Consideration Resource Guide - reference



Assistive Technology (AT) Consideration Flowchart (IEP)



Consider requesting an AT assessment

NOTE: AT can and should be revisited annually or as often as necessary because needs may change over time. Ask your district administrators for specific information about where to document consideration. This is often documented in the modification section of an IEP.

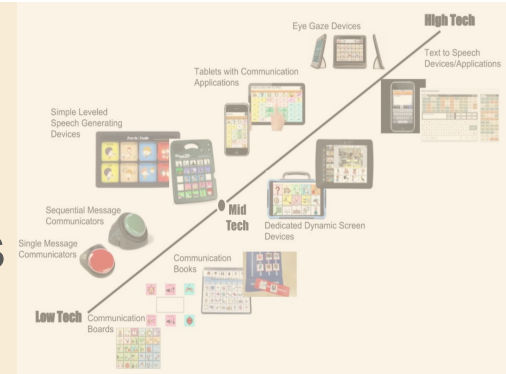
Color Key Orange: Questions to ask. Blue: Possible outcomes. Purple: Action items.



Best Practices in Consideration

Team Members Should:

- Have knowledge to make informed decisions
- Explore a continuum of devices/services
- Use a well-defined process to make decisions
- Base decisions on data and student's goals
- Document in the IEP the reasons to use or not use



adapted from www.qiat.org

AT Consideration - Best Practices & Forms



SETT - <http://joyzabala.com/>



QIAT - <https://qiat.org/> - “Resources”



WATI - <http://www.wati.org/> - “Publications”



GPAT - [Georgia Project for Assistive Technology](#)



Accessible Technology Consideration: Student, Environment, Tasks and Tools (SETT)

Student:

School:

Grade:

Team Participants:

Case Manager:

Phone:

Date:

STUDENT: <i>What are the student's strengths and learning barriers?</i>	ENVIRONMENT: <i>Classes and situations where help is needed?</i>	TASKS: <i>What are the tasks that the student needs to be able to accomplish to meet IEP goals?</i>	TOOLS: <i>What tools are you already using? What tools or strategies do you have questions about?</i>

Trial Period recommended? No Yes If yes, complete and attach Trial Period Plan Form.

Documenting Consideration

SANTA CLARA COUNTY SPECIAL FACTORS

Page ___ of ___

Name _____ IEP Date ___/___/___

Does the student require assistive technology devices and/or services? No Yes (Specify) _____

Does the student require low incidence services, equipment and/or materials to meet educational goals? No Yes (Specify) _____



North West Santa Clara County SELPAs

IEP – Special Factors

Student: _____ Date of Birth: _____ Date: _____

ASSISTIVE/AUGMENTATIVE DEVICES OR TOOLS

Does student require assistive/augmentative devices or tools to meet educational goals?
 No Yes (specify below and include justification)

LOW INCIDENCE BOOKS, MATERIALS, EQUIPMENT

Does student require low incidence books, materials, equipment to meet educational goals?
 No Yes (specify below and include justification)



“Consideration” vs. “Assessment”

- **Consideration**

- A short discussion
- Takes place during IEP meeting
- Uses known information
- Results in decision to not try AT, continue with same AT, try additional AT, or that more information is needed.

- **Assessment**

- Extends from consideration
- 60 days
- Much more detail
- Looks closely at the students abilities, difficulties and the demands of the environments and tasks.
- Acquisition of new information

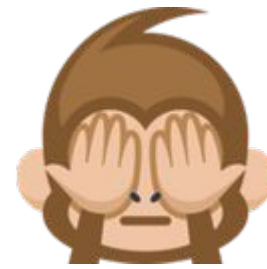
Where Can I Find AT?

- School District, County, SELPA Resources
- Local Libraries (electronic text, audio books)
- Ability Tools Exchange (AT State Program) www.abilitytools.org
- Extensions, Apps, Built-in AT
 - web-based or download; some free trials or lite versions; Accessibility settings
- Vendor Loans - contact regional representatives
- PHP – (lending program on hold during the pandemic)
 - Low Tech Reading/Writing Tool-Kits, Math Toolkit, Early Literacy Kits, Communication Toolkits, Communication iPad, Sensory Kits





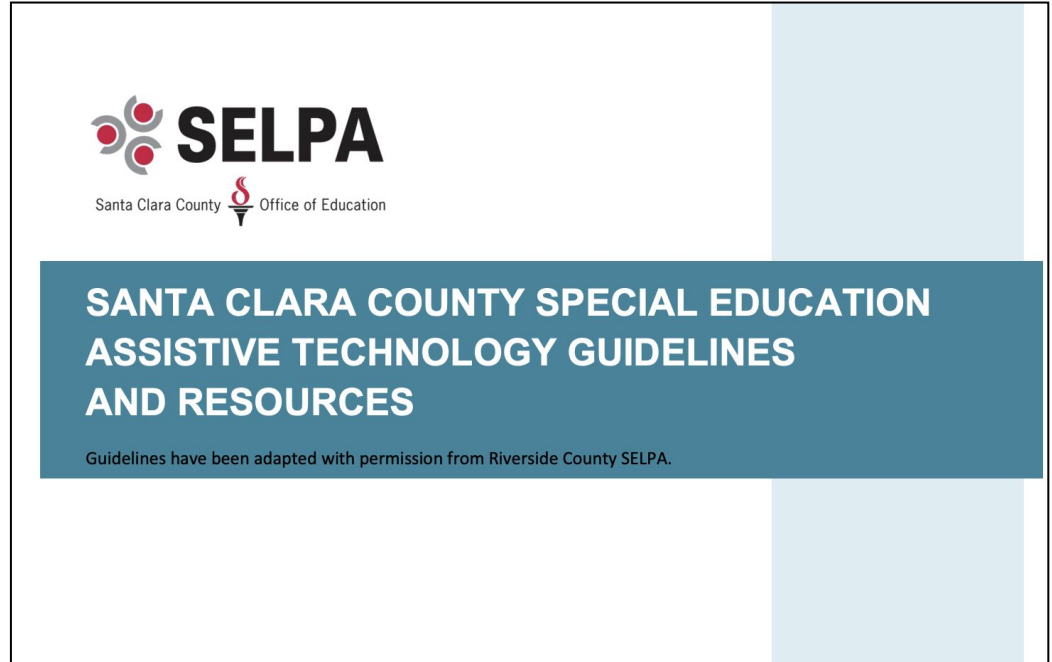
Common Errors



- AT is considered for those with severe disabilities only.
- No one on the team is knowledgeable regarding AT - find a knowledgeable person to invite to the team
- Team does not use a *process* to collect data on the student functional need (ex. **s**tudent, **e**nvironment, **t**asks, **t**ool)
- Consideration of AT is limited to only those items that are familiar to team members.

Adapted from www.qiat.org

Check with your SELPA
for more info about
AT Consideration.



Santa Clara County - [SCCOE SELPA - AT Guidelines](#)

Santa Cruz County SELPA Handbook Ch 14 - [ASSISTIVE TECHNOLOGY CHECKLIST](#)
Monterey SELPA - [Procedural Handbook](#)

Opportunities for Advocacy

What do "decision-makers" need to know? What needs to change?
Help our kids have a voice. Be that voice.

- Volunteer activities; Classroom, school wide, district level, county level
- School Site Council
- District Advisory Committee
- SELPA Community Advisory Committee [CAC]
- School Board Meetings
- County Office of Education Board
- CA State Department of Education Board
- Special Education Advisory Commission
- Voice at the Federal Level
- Get your child involved!



Key Takeaways

- AT is both the **device** and paired **services**
- To find the appropriate AT tool, define the functional need of the student and match the AT features to support that need.
- AT Consideration can be simplified for IEP teams by using a **well-defined process**, and readily-available frameworks and forms. Ex. SETT

Your Takeaways?

Education, IEP, Advocacy questions?

- info@php.com

PHP e-Learning: <https://www.php.com/>

- archived webinars, trainings, support, information



AT Questions or Techsplorations:

Dianah Marr dianah@php.com

Susana Navarro susana@php.com



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Tele-Techsporations include:

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- Information for both parents and professionals

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Assistive Technology includes many types of tools and techniques. Learn about options available.

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Attention & Focus
Mind Maps
Browsers
Extensions
Mobile Apps
Highlighting
Organization Tools
Visual Masking
Keyboards
Study Strategies
Organization
Keyboards

 Parents Helping Parents

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408-727-5775



THANK YOU FOR ATTENDING

PARENTS HELPING PARENTS

Provides information, support and training to families raising children with special needs, including:

- 1:1 Consultations
- Webinars
- Support Groups
- E-Learning Library
- Online Resource Directory
- iTech Center
- and more!



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Other Resources:

[ePacket Understanding Dyslexia - Basic Resources](#)

[ePacket - AT Consideration](#)

[ePacket - AT Trial Period](#)

[ePacket - AAC Resources](#)

[ePacket - List of App Search Pages](#)

[Accommodations for Students with LD | LD OnLine](#)