


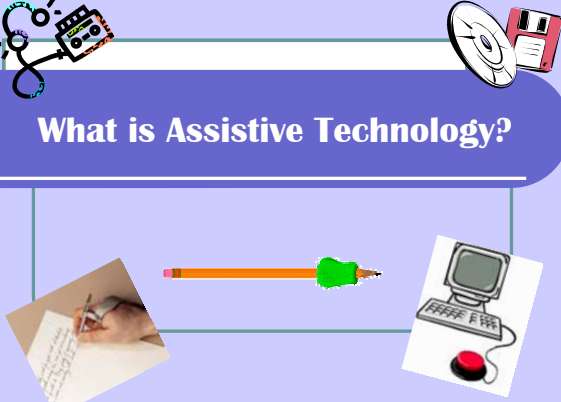
## Assistive Technology: Tools for Learning



Presented by:  
**Team of Advocates for Special Kids**  
 Laura Simmons-Martinez, Technology Project Director  
 Sandra Aranda, AT Specialist

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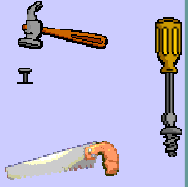
## What is Assistive Technology?



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## Technology = Tools

- ✓ Extend physical abilities
- ✓ Make work more efficient
- ✓ Extend instruction and communication abilities



3

## Federal Definitions

**Assistive Technology 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 individuals with disabilities.”

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## Assistive Technology Service:

- The term “Assistive Technology Service” means any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device.

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## Assistive Technology Services Include:

- ❖ Evaluation in natural environment
- ❖ Provide/purchase or lease devices
- ❖ Select, design, fit, customize, maintain, repair, etc. devices
- ❖ Coordination with other services
- ❖ Training for the individual and/or family, professionals, employers

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### How Does The IEP Team Know If Assistive Technology Is "Needed" Or "Required"?

- ❖ The only way to truly know whether assistive technology will make a significant difference for a student is to **try it out**.



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### For instance:

- If a student is struggling with getting meaning from printed text, the IEP team may think that the student will benefit from having text scanned into a computer and spoken.
- *The only way to determine if this will work is to try it.*

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- If the student has never tried the assistive technology, the IEP team should *write the trial use of the technology into the IEP*, rather than the purchase or permanent acquisition of the assistive technology.

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### The IEP should specify the types of devices that are required

...and should include information on:

- How the device(s) will be used?
- Where the device(s) will be used?
- When the device(s) will be used?
- Who will be responsible for supporting device(s) use?

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### What Are Some Of The Things Assistive Technology Can Do For Students?

- Make things easier to turn on
- Hold things steady or in place
- Help a student get dressed or eat
- Help a student learn
- Make playing or recreational activities possible
- Allow communication or improve communication
- Help a student see or hear better
- Help a student control things such as a television, radio, computer or lights

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### When Is AT Required?

- ❖ **IDEA** states that "assistive technology devices and services" must be provided by school districts to eligible children if necessary to ensure the provision of a free appropriate public education.

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## A.T. Consideration

- ❖ Assistive Technology should be considered *if its use will help the student perform a skill* (read, write, communicate, etc.) more easily or efficiently, in the least restrictive environment or with less personal assistance.

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## What is the difference between an accommodation and a modification?

- *Accommodations and modifications are types of adaptations that are made to the **environment, curriculum, instruction, or assessment practices** in order for students with disabilities to be successful learners and to participate actively with other students in the general education classroom and in school-wide activities.*

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## Accommodations

- Accommodations **do not change** or alter what is being measured and are considered changes in the way a test (assessment) is given or taken.



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## Accommodation Examples:

- Test taken orally or additional time to take test
- Large print textbooks
- A locker with an adapted lock
- Weekly home-school communication tool, such as a notebook or daily log book
- Peer support for note taking
- Lab sheets with highlighted instructions
- Graph paper to assist in organizing and lining up math problems
- Tape record lectures
- Use of a computer for writing

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## Modifications

- Modifications **definitely change** or alter what is being measured and are considered substantial changes in the way a test (assessment) is given or taken




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## Modification Examples:

- An outline in place of essay for major project
- Picture communication symbols (PCS) choices on tests
- Alternative books or materials on the same theme or topic
- Spelling support from a computerized spell check program
- Word bank of choices for answers to test questions
- Use of a calculator on a math test
- Questions re-worded using simpler language
- Projects substituted for written reports
- Important words and phrases highlighted

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## The Assistive Technology Evaluation



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## Requesting an Assistive Technology Evaluation

**Request in writing: "example"**

- I am requesting an assistive technology evaluation for my son (daughter), Tobi who attends Polytechnic High School in the Special Day Class. I am requesting this evaluation to see if there is any technology that may help and enhance my son's educational day.
- Some concerns are based on: he needs interventions for nonverbal communication.

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## A.T. Evaluation (cont.)

- I understand that I must be presented with a written assessment plan within fifteen (15) days and that the plan will inform me of the test to be given, dates for the tests and the names of the persons who will administer the tests, as well as explanation of the tests and their purposes.

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### Sample Letter Requesting an Assistive Technology Evaluation

March 1997

Dear Sir:

Our daughter Catherine, an IDEA-eligible student, is currently receiving special education and supportive therapies through the public school district. As she is progressing through the elementary school grades, the curriculum is demanding more and more written work from her. At this point, teachers or assistants are writing for her, but this method does not allow Catherine the opportunity to compose written work on her own.

As Catherine's parents, we think the time has come to consider assistive technology for Catherine to allow her to learn to do written work on her own so that she can learn the mechanics of writing and can put her own thoughts down on paper for others to read.

To this end, we are requesting an assistive technology evaluation for Catherine to determine what kinds of technology are necessary to assist her with written expression. We are assuming that the assistive technology evaluation will be performed at district expense by professionals who are qualified to determine: (a) what assistive technology may be necessary for Catherine, (b) what assistive technology devices might be helpful, and (c) what occupational and physical therapy services may be necessary to support the technology.

We would like to have this evaluation completed so that information is available prior to the convening of the IEP Team to write Catherine's Individualized Education Program for next year.

We appreciate your assistance with this matter and look forward to hearing from you.

Yours truly,

*Sherry Stewart*

## Who Identifies the AT?




- IEP/support staff with AT experience
- School district staff specialists
- Independent service providers
- Resource group/service agency specialists

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## Where Does the AT Evaluation Take Place?

- student's natural environment or,
- the site most conducive to the evaluation process



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## Who Attends?



- ❖ Student and family members
- ❖ IEP/Support team members
- ❖ AT Evaluators

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## During the Evaluation:

**AT Solutions addressing specific needs are examined**

**Options are discussed and recommendations made**

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## AT Report

### ➤ Report includes:

- ✓ reason for referral
- ✓ student needs
- ✓ AT recommendations and justifications
- ✓ Resources (Vendor information)
- ✓ AT training needs



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## Frequently Asked Questions

- Can I bring the device home? (see next slide)
- I am moving/transitioning to another district, can I bring the device with me?
- Who is responsible for maintenance and repair of the device?
- The school said they were out of funds for devices for this school year, is this legal?

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## Does The District Have To Send The Assistive Technology Home?

- The IEP team must decide if the assistive technology is needed at home. The law states: "On a case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings is required if the child's IEP team determines that the child needs access to those devices in order to receive FAPE.

(Authority: 20 U.S.C. 1412(a)(12)(B)(i))

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## What Types of Technology Can Help ?



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## Range of AT Options

<p><b>Light/Low Tech</b></p> <ul style="list-style-type: none"> <li>➤ simple tools and adaptations</li> <li>➤ often readily available</li> <li>➤ inexpensive</li> <li>➤ require little training</li> </ul>	<p><b>High Tech</b></p> <ul style="list-style-type: none"> <li>➤ more complex electronics</li> <li>➤ costly</li> <li>➤ require training</li> <li>➤ may be highly customizable</li> </ul>
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## The 5 Categories of Assistive Technology:

- ❖ Cognitive/Learning
- ❖ Physical
- ❖ Communication
- ❖ Vision
- ❖ Hearing



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## Some of My Favorite AT Stuff!

1. Cool Low Tech STUFF!!!
2. Cosmo's Learning Systems
3. The Tango!, by Blink-Twice Technologies
4. Solo, by Don Johnston
5. Key to Access, by Premier Assistive Technology
6. The Writer (& FUSION) Keyboard

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## Light/Low Tech Examples

- ✓ Pencil Grips
- ✓ Special Scissors
- ✓ Hi-lighter Tape
- ✓ Adapted Books
- ✓ Color Filters (overlays)
- ✓ Special Paper
- ✓ Hand Held Devices





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## Low Tech Vendors include:

- Onion Mountain Technology - [www.onionmountaintech.com](http://www.onionmountaintech.com)
- Therapro - [www.theraproducts.com](http://www.theraproducts.com)
- LS & S Products - [www.lssproducts.com](http://www.lssproducts.com)
- Independent Living Aids - [www.independentliving.com](http://www.independentliving.com)


Please see Resource Sheet for more...

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## Cosmo's Learning Systems

By: AT KidSystems

An interactive learning system designed to include all children regardless of ability.



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## Cosmo's Learning Systems

- Includes "Mission Control", a specialized computer input device.
- Features innovative software that is based on developmentally appropriate concepts and encourages learning through exploration.
- Fun, Interactive, and Motivating!



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## How is Mission Control Different from a Keyboard?

- The child uses **Mission Control** to control computer games by applying different amounts of pressure to the four large activators and receives feedback while playing the software game.
- A built-in microphone which responds to the child's volume level and duration of vocalization.



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## Why is this software different?

- **Cosmo's Play and Learn™** software is a family of educational and computer games that aim to entertain children of developmental ages 2-to-8 years.
- This unique, developmentally appropriate software was created by a team of educators; physical, occupational, and speech-language therapists; and assistive technology practitioners.



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## Specifically, this software program teaches:

- Colors, relative size and amounts (e.g., bigger/smaller, more/less),
- following verbal directions, and prepositions (e.g., on, in, under).
- It also introduces numbers, counting, and shapes.

*Aside from these specific goals, the software is aimed at improving attention/focus, sustained play, and problem solving.*

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## Possible AT Goals Could be:

"Using Cosmo's Learning System, Valerie will correctly identify shapes, 4 out of 5 times presented."

or...

"Valerie will practice vocalizing by speaking into the built in microphone" ....

or

"Valerie will follow multi-step directions"...

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## AT for Infants and Toddlers

- Federal education amendments require states to "promote the use of assistive technology devices and assistive technology services, where appropriate, to enhance the development of infants and toddlers with disabilities."

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## The Tango!

By: Blink Twice Technologies

*Specially designed for children, Tango is a communication device that contains phrases, words, and spelling, all in easy-to-understand, digitally enhanced or synthesized voices.*



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## Augmentative Communication Device or Voice Output Communication Aid:

A device, which assists speech impaired, or non-verbal individuals with communication through synthesized or recorded speech.



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## The Tango!

by Ablenet/Blink-Twice

- The tango! is the first speech generating device to bring the power of mass communications and consumer electronics to the world of Augmentative and Alternative Communication (AAC).
- “Communication is complex. But now an AAC device doesn’t have to be. Try the tango! and see why others are embracing the amazing power of simplicity.”

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## Tango! By: Blink Twice/Ablenet



Visit [blink-twice.com](http://blink-twice.com) to experience the tango!



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## Six Amazing Buttons!

- With the Tango’s 6 buttons, you’ll discover an amazing world of more than **2,000 digitally enhanced phrases, plus more than 3,000 words and 90 core words.**
- Built-in camera to take hundreds of photos and put them into one of 30 photo albums, or take photos to create thousands of new images.
- You’ll even find a story wizard that allows you to create and store up to 60 sequential stories, plus a pop up keyboard for spelling with word prediction.

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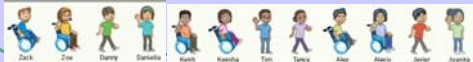
## Tango Videos.....



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## Welcome to Tango Town!

- Now you can choose any of these cool new characters for your tango!
- Choose the one that best matches the person who will be using it.
- Varying ethnicities
- Ambulatory/non-ambulatory.



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## Possible IEP Goal:

- One type of annual goal might address a social issue like communication with peers:

*“Using an electronic communication device, Sara will respond appropriately to social inquiries from classmates 5 times out of 5 opportunities over 3 consecutive days.”*

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## Objectives leading to this goal might include:

- Training in the use of particular words and phrases on the communication device,
- Drill and practice in responding with the device in structured settings,
- Increasing accuracy in responding in structured settings, practice in unstructured conversational opportunities,
- and gradual achievement of accuracy in unstructured conversational settings with peers.

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## Solo (Software)

By: Don Johnston

*SOLO is a software tool set that builds learning skills in reading, writing, planning, organizing, revising and editing for students in grades 3 to 12.*

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## Solo, by Don Johnston

- ❖ SOLO combines all of Don Johnston's proven, industry-standard interventions
  - ❖ *Write:OutLoud* (talking word processor)
  - ❖ *Co:Writer* (word prediction)
  - ❖ *Draft:Builder* (Outlining)
  - ❖ *Read:OutLoud* (Screen Reader)

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## Write Outloud (Solo Edition)

- Write:OutLoud is a talking word processor that motivates students to write, revise and edit independently.

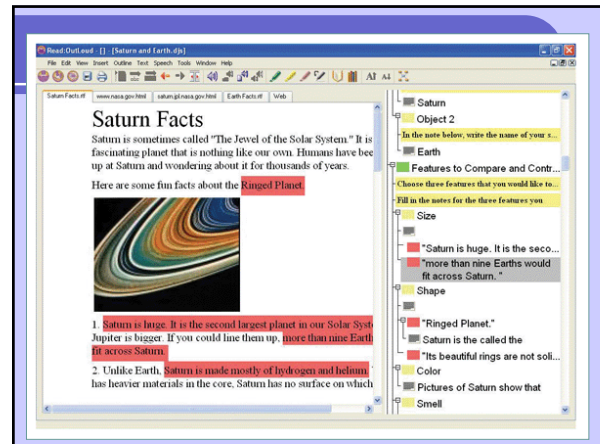


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## Write OutLoud Includes:

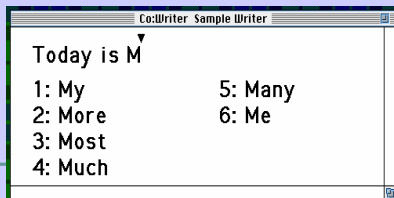
- The Franklin Spell Checker and Dictionary with Homonym Checker.
- Students now have support for spelling and choosing words with a spell checker, dictionary and homonym checker that talks!

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## Word Prediction Programs

- **Word prediction or word completion programs** predict words on the basis of the first few letters typed, providing an excellent support tool to poor spellers.



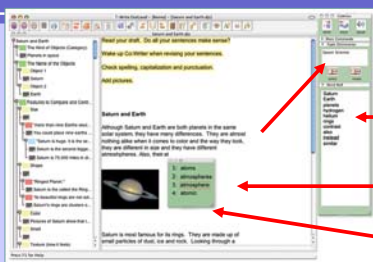
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## Co Writer:

- For struggling writers, translating thoughts into writing can feel overwhelming. Their writing often suffers from phonetic or inventive spelling, lack of richness, limited detail, and incoherence.
- The **eWord Bank** and included **Topic Dictionaries** give targeted vocabulary support when writing on any topic and in any genre.

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## Co: Writer Solo Edition

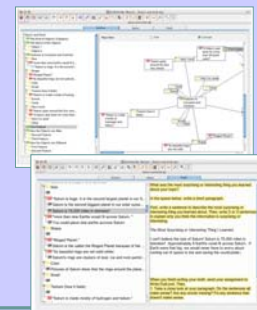


- Topic Dictionaries
- E-word Bank/Word wall
- Linguistic Word Prediction
- Flexible Spelling

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## Draft Builder Solo Edition

- **Draft:Builder** is the *writing and graphical organizer* that moves students through **planning, organizing and draft-writing** in content areas.



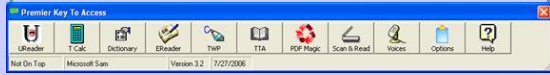
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## Key to Access

by: Premier Assistive Technology

- By just inserting the MP3 Player into any USB Port, the floating tool bar will appear and then you just select any of the eight different tools. The software NEVER needs to be installed on your computer. All your personal settings are saved on your Key to Access so that no matter which computer you use, your access will be the same.



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## The Key To Access contains the following tools:

- Premier Predictor Pro
- Scan and Read Pro
- Universal Reader Plus
- E-Text Reader
- Ultimate Talking Dictionary
- Talking Word Processor
- PDF Magic
- Text To Audio
- Talking Calculator



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## The Key to Access also includes:

- MP3 Player - weighs less than 1 ounce.
- Digital Voice Recorder (great note taking!)
- 2 GB Flash USB Drive – 1.5 GB free space to hold up to 32 Hours of audio books.
- Ear Bud Headphones.
- Requires only 1 AAA battery that lasts about 16 hours of listening - Included.

*Requires Windows 2000 or XP  
with 128 MB of RAM and access to a USB port.*

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## Plug it into the USB drive and you have access to a suite of ten accessibility tools:

- 1) *Universal Reader*: ideal for reading emails and web pages
- 2) *E-Text Reader*: a tremendous study tool that allows you to highlight, bookmark, search and extract text from a document.
- 3) *Ultimate Talking Dictionary*: a 250,000-word dictionary with integrated thesaurus
- 4) *The Talking Word Processor*: a talking word processor talking word prediction and the world's most powerful talking grammar check.
- 5) *Scan and Read Pro*: powerful scanning software that allows you to capture hardcopy materials in a digital format then reads them to you

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- 6) *PDF Magic*: outstanding for converting inaccessible PDF files to accessible formats.
- 7) *Text To Audio*: Lets you convert digital documents to MP3 format and put them right on your Key to Access player so that you can listen to them away from your computer.
- 8) An on-screen *Talking Calculator*.
- 9) *Premier Predictor Pro*'s powerful prediction technology.
- 10) *PDF Equalizer* allows you to work with PDF files like never before!

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## A Possible IEP Goal:

- "Given a topic, internet access, and the Key to Access, Eric will prepare a report of at least 500 words using at least 3 sources".



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## The Writer


**By: Writer Learning Systems**

*The Writer combines simplicity and ease of use with a powerful array of skill building features not found on any other portable keyboard.*

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## The Writer,


by Advanced Keyboard Technologies, Inc



**Before we** put students on a Multi-media computer with the Internet where they change fonts, change colors and surf the net; they need to learn how to write properly!

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### Struggling Students need to know:



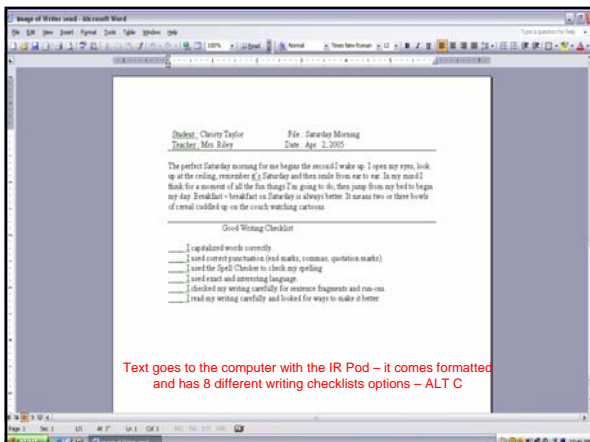
- Proper keyboarding skills
- Spelling
- Vocabulary
- How to formulate sentences
- Write Journal
- Use a thesaurus
- Learn adjectives
- Sentence structure
- Etc.

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### Every Writer Comes With.....

- Work Folder Filing System
- Keyboard Instruction
- Easy Wireless Send
- Formatted File Transfer
- Adjective Builder
- Spanish to English Dictionary
- Creative Writing Prompts
- Spell It! Vocab. Program
- Daily Journal
- Thesaurus
- Auto-Thesaurus

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Student: Cheryl Taylor      File: Saturday Morning  
Teacher: Mrs Riley      Date: Apr. 2, 2005

The perfect Saturday morning for me begins the second I wake up. I open my eyes, look up at the ceiling, remember it's Saturday and then smile from ear to ear. In my mind I think for a moment of all the fun things I'm going to do, then jump from my bed to begin my day. Breakfast - breakfast on Saturday is always better. It comes two or three bowls of cereal cuddled up on the couch watching cartoons.

Good Writing Checklist

- \_\_\_ I capitalized words correctly.
- \_\_\_ I used correct punctuation (end marks, commas, quotation marks).
- \_\_\_ I used the Spell-Checker to check my spelling.
- \_\_\_ I used exact and interesting language.
- \_\_\_ I checked my writing carefully for sentence fragments and run-ons.
- \_\_\_ I read my writing carefully and looked for ways to make it better.

Text goes to the computer with the IR Pod – it comes formatted and has 8 different writing checklists options – ALT C

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## The Writer FUSION

by: Writer Learning Systems

*Think outside the laptop.  
Technology needn't be expensive  
or complex to be effective.*

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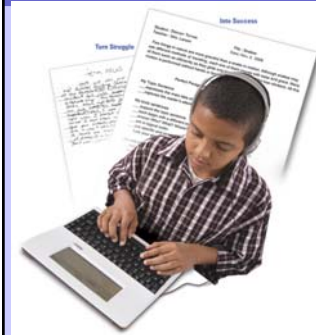
## Fusion's unique features!

- Text to Speech with adjustable volume and speed control.
- Word prediction with optional read back feature.
- Adjustable font size.
- Memory expansion port.
- Spell check and thesaurus automatically read back.



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## Universal ACCESS for ALL students



- General Education
- ELL – English Language Learners
- Resource rooms
- Special Education
- Emerging readers and writers
- One to One projects, kids take them home
- Targeted at risk learners-underperforming

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## Thesaurus and Auto Thesaurus Kids need to expand their word choices

Highlight anywhere on the word then hit the thesaurus key.

The sun was out and the sky was light blue.  
It was such a **pretty** day that I couldn't stand to be inside for one more minute.

It was such a **pretty** day that I couldn't  
>attractive  
beautiful  
dainty

lovely	quaint	gorgeous
pleasing	scenic	handsome
picturesque	delicate	sweet
pleasant	cute	glamorous
pictorial	elegant	peaceful

81

## On board every Fusion

- Desktop System – files and folders
- Font size changes
- Split screen option
- Copy, Cut and Paste
- iScore - immediate
- Easy Wireless Send
- Formatted File Transfer
- Writing Checklist
- Password protection
- Spell Check
- Dictionary
- Thesaurus
- **Word Prediction Software and Text to speech add on offered.**



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## Other Portable Word Processors:

### Products to Consider:

- Alphasmart 3000, Neo, Dana, by Alphasmart
- Laser PC6, by Perfect Solutions
- Quickpad Pro, by Quickpad Technologies
- DreamWriter, by Branium
- The Writer, by Advanced Keyboard Technologies



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## AT as a Supplementary Aid:

- Assistive technology in the form of a Writer Keyboard is necessary for Janie to remain in the regular classroom, working independently.
- This use of the keyboard can be written into her IEP as a *supplementary aid* which is necessary to support Janie's placement in the least restrictive environment.

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## AT as a Supplementary Aid

- Assistive technology is necessary as a *supplementary aid* if its presence (along with other necessary aids) supports the student sufficiently to maintain the placement, and its absence requires the student's removal to a more restrictive setting.

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## Supplementary Aid

The use of a portable word processor could be written into the IEP as a supplementary aid.

- Janie likes being a regular fourth grader. She is proud of her writing with The Writer Keyboard, because she is using her own words and learning to edit out her mistakes by herself.
- With this portable keyboard, she does not need the services of an aide and can be completely independent in doing her school work.

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## Keyboarding Objectives:

- Using *The Writer's* keyboarding instruction program (at least 10 minutes per day, 4 days a week), Jodi will learn to type at a rate of at least 20 wpm with 4 or fewer errors.

*(This addresses a skill which is necessary for using AT.)*

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## Possible IEP Goal

- "Using The Writer Keyboard, Janie will compose three paragraph themes with fifteen or more sentences at 80% or better accuracy in the use of spelling, punctuation and grammar".
- *This technology can also be used to transition from high school to college.*

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## Funding Ideas:

*Funding questions are difficult because each state is different... here are some general sources.....*

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## Funding of Assistive Technology

### Funding & IDEA

Under California law funding is provided for equipment and services required in the IEP for students with **low-incidence disabilities** (visual, hearing, or solely orthopedic impairments).

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## Other Possible Funding Sources

- Private Health Insurance
- Medi-Cal, Medicaid, Medicare
- California Children's Services
- Regional Center (CA only)
- School Districts (if IEP specifies the need)
- California State Department of Rehabilitation Services
- Veteran's Administration



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## Possible Funding Sources

- PASS (Plan to Achieve Self Support) through SSI or SSDI
- Local Easter Seals-physically disabled
- March of Dimes
- Muscular Dystrophy Association
- United Way



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## When there is no source of funding...

- Christian Fund for the Disabled
- Local Elks Club
- Local Kiwanis Club
- Lions Club-low-vision/blind
- Local Rotary Club
- Local churches



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## When it comes to funding.... Be Persistent, Be Creative!



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## ANY Questions???



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## Still Curious? Come and Try it Out for Yourself!!



Come to the **La Jolla Room** from 3-4 pm today, or between 10:30-4:00 tomorrow to try anything you've seen today for yourself!

Tomorrow, there will be a FULL AT LABI

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**Resources used in this presentation include:**

- Parents Let's United for Kids [www.pluk.org](http://www.pluk.org)
- Family Center on Technology and Disability (FCTD) <http://www.fctd.info/>
- Georgia Project for Assistive Technology [www.gpat.org](http://www.gpat.org)
- IEP Resources [www.attainmentcompany.com](http://www.attainmentcompany.com)
- Alliance for Technology Access [www.ataccess.org](http://www.ataccess.org)
- PEATC <http://www.peatc.org>

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**Assistive Technology is for....**



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**For More Information on anything you've seen today...**

Call (866) 828-8275  
email: [taskca@yahoo.com](mailto:taskca@yahoo.com).  
TASK's website address is: [www.taskca.org](http://www.taskca.org)  
Contact: Laura Martinez

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*Ability without opportunity is like a seed never watered.*



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