

Switch Access, Vision Challenges, Complex Communication Needs and Literacy Learning

Linda Burkhart



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Which Kids?

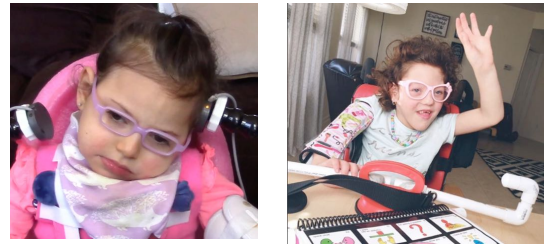


Severe Physical Challenges



- Limited ability to use direct selection with hands

Vision Challenges that Impact Ability to Discriminate Symbols Pictures and Text



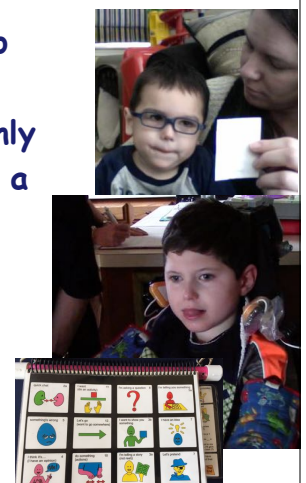
- Ocular disabilities
- Cortical Visual Impairment (CVI)

Vision Challenges that Impact Ability to Discriminate and Read Text

- Ocular disabilities
- Cortical/Cerebral Visual Impairment (CVI)
 - Range of visual abilities and characteristics (Roman-Lantzy)
 - May improve with massive meaningful visual experiences in natural contexts
 - Complexity is often an issue that is difficult to resolve

Complex Communication Needs

- Access often limited to auditory-plus-visual scanning or auditory only scanning for access to a robust language
- May or may not have access to learning a robust aided-language system - **So this becomes a priority!!!**



Which to Prioritize? Motor, Vision, Communication, Literacy? All are Important!

- With the right adaptations, tools and strategies, individuals can:
 - Improve motor control
 - Improve vision
 - Develop language and communication
 - Develop literacy skills

Best Practices in all areas: Motor, Vision, Communication, & Literacy

- Natural contexts - integrated all day
- Teachers, Communication Partners need to develop good observational skills to set up and monitor adaptations on the spot
- Active learning and intrinsic motivation is critical
- Challenging individual at just the right level for learning (Zone of Proximal Development)
- Develop goals as a team with the long-term outcomes in mind

Parallel Learning - Juggling Act Work toward automaticity in each area over time by balancing difficulty in each area

- Only one challenging area at a time
- Motor, communication, vision, literacy, cognition, etc.
- Can't test through modalities that are not yet automatic



Learning is Dependent upon Active Engagement

- Moving an individual's body through motor patterns multiple times is not as effective as the child having a reason to move
- Random visual stimulation done to the individual is not as effective as helping that individual develop visual curiosity
- Drilling or testing an individual on vocabulary or syntax is not as effective as modeling language with a full range of functions across the day in natural contexts
- Literacy develops through active engagement with personal meaningful experiences - not drills on visual identification of letters and words

Literacy for these individuals Who has it figured out?

Let's explore some ideas to start with!

Immersion in Language and Literacy that an Individual can Access

- Best practices in teaching aided-language involves immersion in aided-language learning environment - based upon how typical kids learn to speak
- Best practices in teaching literacy involves immersion in a literacy rich environment, in conjunction with a robust literacy instruction - based upon how typical kids learn to read

Select Communication Symbols based upon the ability of the individual to perceive differences
 auditory? visual? auditory plus visual?

Symbols then need to be organized into a Robust Language System that Has Clear Patterns of Organization



Likewise for Literacy

- Select/Design literacy materials that the brain can take in and discriminate to use for literacy
- Present text within books and materials so kids begin to develop concepts about print
- May be visual, auditory, multi-modal

alphabet action activities, song boards, audio or e-books, interactive letter games

Then, we need to present them in natural contexts with consistent, meaningful, patterns

Communication Symbols during communication and Text during literacy learning opportunities

Issues / Problems with tactile symbols



Try this:



Neurological connections to understand tactile input through hands

- Children who can actively explore the environment using their hands:



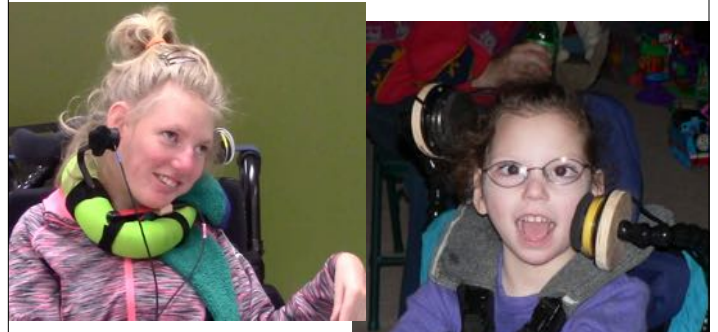
- Have built connections in their brain to discriminate tactile input
- Might be able to learn to use a Communication Book that has braille on each symbol
- Tactile symbols alone would not allow for a portable robust enough language
- Might combine tactile with auditory scan

Neurological connections to understand tactile input through hands

- Children who have not had the opportunity to explore tactually with their hands due to physical challenges:
 - Have not developed neurological connections to process touch
 - May need to use other alternative access methods that rely more on their auditory strengths



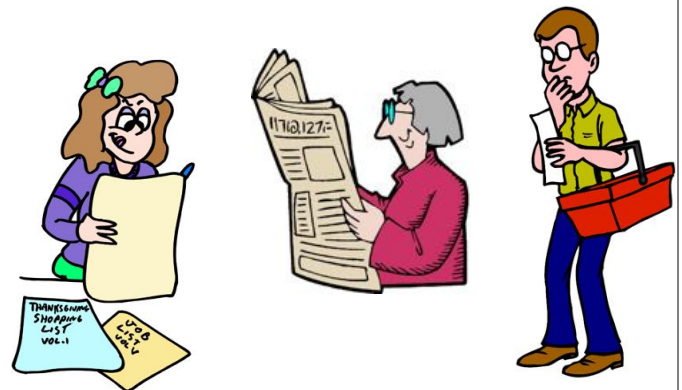
Access To Emergent Literacy is More Than Just Using a Switch to Listen to a Story



Build a Base of Multi-Modal Literacy Experiences - NOT Isolated "Readiness" Skills



Understanding that Text has Meaning



- Exposure and play opportunities for functional use of print: lists, notes, cards, recipes, letters, email, direction sheets, signs, labels, etc.

read whisper read fast read slow read like a robot print save all done

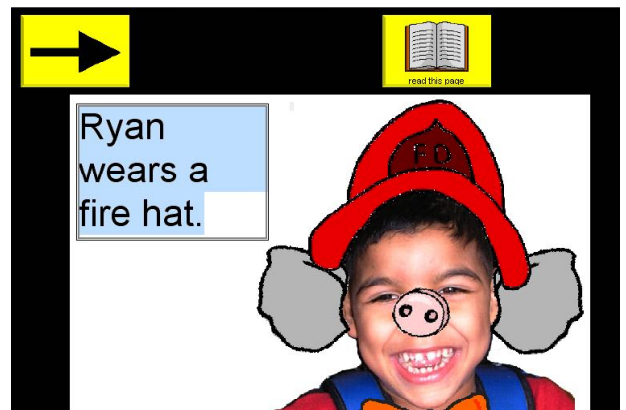
Dear Mom,
You are the best!



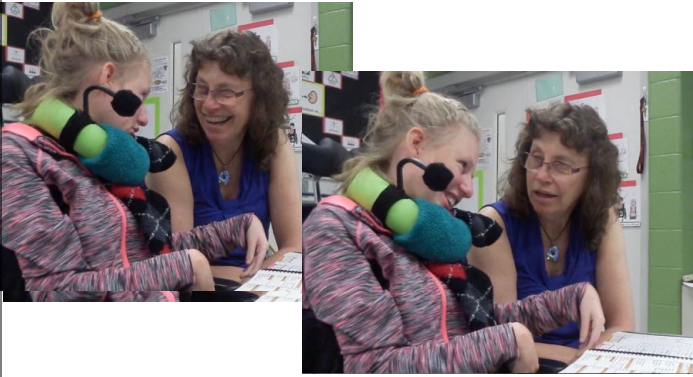
Smooch, smooch!

Love, Ryan

Concepts about Print / Books Digital and Print



Cognitive and Motor Load are both High for children who have severe physical challenges plus vision challenges



Don't Overload the Visual Channel

- CVI Range (Roman-Lantzy) to determine how materials should be presented
- Reduce complexity (visual and auditory)
- Use auditory channel if vision requires too much effort or if it is not at a sufficient level on the range to introduce visual text

When the Main Gateway to the brain is Auditory:

- Bottleneck of input to the brain
 - monitoring safety in the environment (fight or flight)
 - Input needs to be auditory
 - Communication system: auditory scan
 - Access needs to be auditory
 - Thought is probably auditory
 - Holding a thought is challenging when needing to attend to everything through the same channel

Some Children will be Learning via Dual Literacy Paths

- For children who have some visual abilities:
 - Visual reading and listening comprehension skills may be at very different levels
 - Can work on both at appropriate levels
- One should not hold back the other - some children can progress in both

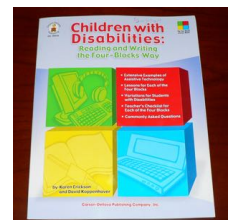
Auditory Channel - May be the Best Possible Option Left for Input and Discrimination

- May be a strength
- May or may not have additional auditory processing challenges
- May be able to get some input visually, but not as reliable as auditory
- Vision may actually add complexity for some children

Literacy Four Blocks

(Patricia Cunningham)

- Working with Words (phonics, letter names and sounds)
- Comprehension: Guided Reading & Shared Reading
- Self-Selected Reading
- Writing



Karen Erickson and David Koppenhaver

Center for Literacy and Disability Studies

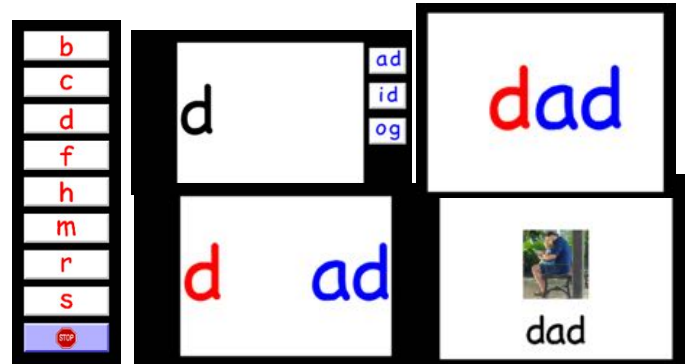
<https://www.med.unc.edu/ahs/olds>

Jane Farrall Consulting
www.janefarrall.com

Working with Words - emphasize auditory components

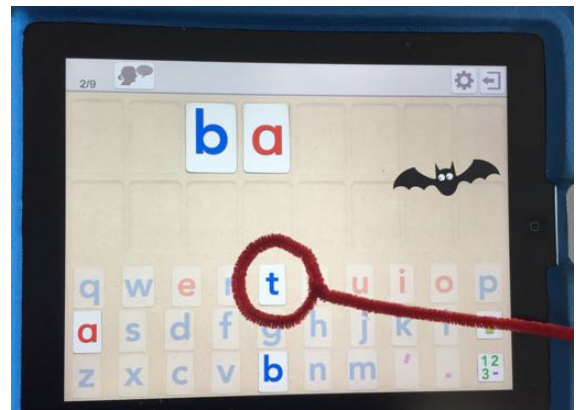
- Phonemic Awareness
- Rhyming
- Alliterations and tongue twisters
- Letter names - Auditory Hook word
- Letter sounds
- Onsets and Rimes
- Making words
- Syllables

2 Switch Step Scanning Activities to Play with Sounds



2 Switch Step Scanning Activities to Play with Sounds

Partner Assisted Scanning on Apps - Word Wizard



Challenge: to see and visually discriminate a letter to connect a letter sound to

Provide: a personalized set of hook words for each letter of the alphabet

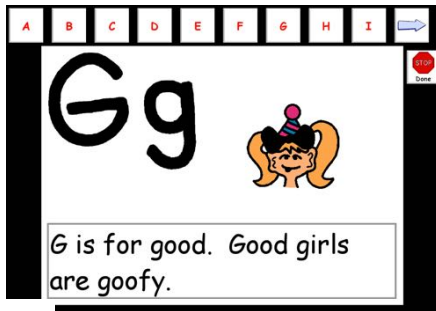
Auditory Hook Words

Hook Words

(Select one hook word for each letter)

- A**pple, ask
Bye, boy, bus, bed, bad, back, ball, bug, bat, bath, bell
Cold, Cut, Cat, Cup, Calm, Come, car, cart, cover, carry
Dance, Dog, Dad, day, dance, dark, done, doctor, door, do
End, elephant, elevator, empty
Fun, Fish, fast, feet, fix, fan, feel, fist, finger, family, full, farm
Good, gas, get, give, go, girl, game, gone, goofy
Hug, hat, hand, hi, happy, hard, head, hello, help, hot, hair, hit, head, house, hungry, hurt
Ich, in, it, instruments, it
Joke, Jump, job, jar, jelly, jacket, jeans, jewelry, jingle, joy, juice
Kiss, kick, kid, key, kitchen
Love, laugh, leg, lip, lick, lift, like, list, look, last, lazy, lap, loud
Mad, mom, mat, math, me, mess, miss, more, move, music, mud, mouth, money, milk
No, not, name, nap, need, new, nice, night, nose, nut, nurse, noisy, neck, nag
Off, oh

ABC Hook Words Book



Hh



H is for hug. A hug makes me happy.

Pp

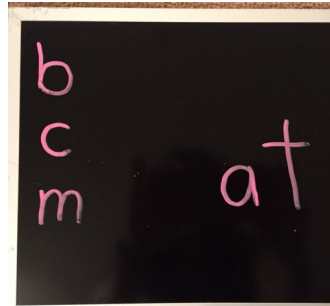


P is for Pants. My pet pig peed on my pants.

Hook Words Book sounds

"Non-Electronic" Working with Words

- Black dry-erase with fluorescent markers
- Velcro/magnet cards on black Velcro or magnet boards



Writing:

Write for a purpose
and an audience

- Sample purposes: email, text, cards, invitations, shopping list, sign, letters, story, journal, Facebook post, etc.
- Remnant books for setting topics
- Robust AAC system to talk about writing
- Share writing with others

Forms of Writing

(Always have a purpose)

- Scribbling / Writing with the Alphabet
- Co-planning Errorless Writing
- Predictable Charts and Sentence Starters for group writing
- Writing with AAC - Robust Language System
- Combination of AAC and alphabet at child's discretion

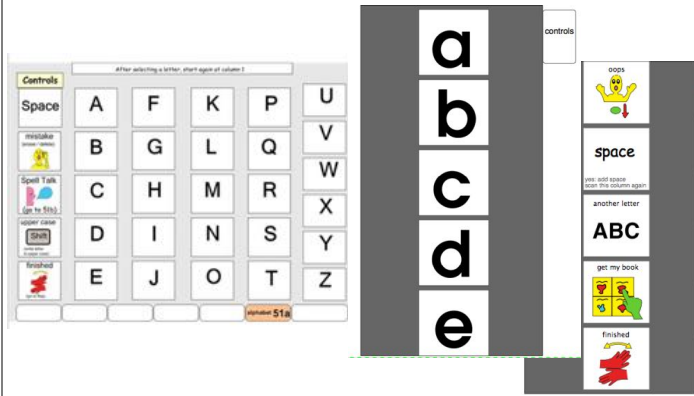
Co-Planned Failure Free Writing

| | | |
|----------------|----------------------|--|
| Dear Mom | | |
| Hey Kyle | | |
| Hi Savana | Love, Name | Hey Kyle, Guess what? I did great in math today! Isn't that awesome? Do you believe it? |
| Hi Dad | Catch ya later, Name | |
| What's up guys | Your friend, Name | |
| Hi Megan | | |
| | | |

Modeling Writing

- Model writing for multiple purposes throughout the day
- Use child's alternative pencil
- Use child's AAC system
- Don't worry about using full sentences for a child who is at a younger expressive language. Model slightly above the level they produce
- Use Self-Talk and Verbal Referencing

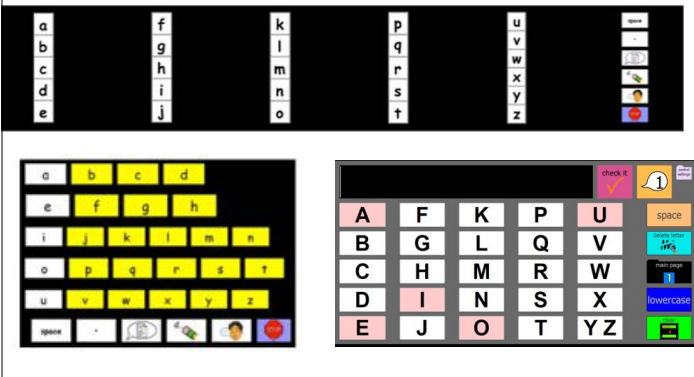
Writing with the Alphabet Alternative Pencil



Writing with the Alphabet

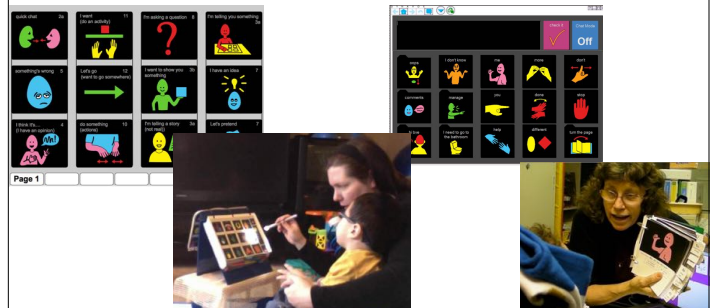


Writing with the Alphabet "High Tech"



Writing with Whole Words

Use of Robust AAC system to write and talk about writing



Writing email to Ian (friend)
Sean age 7

I'm asking a question,
Tell me yes or no, meet
buddy?

Letter to Lauren (previous assistant)
Tom age 8

Why I think you good, great,
excellent, fantastic and cool is
because I feel horrible, strange
trying hard when not here with me.

Scribing for the Writer

- Self-Talk while writing / typing
 - sounding out words
 - naming letters
 - calling attention to hook words
 - calling attention to word walls
- Spelling with rhythm - ear print for the spelling of words

Scribe - Don't suggest edits during initial writing



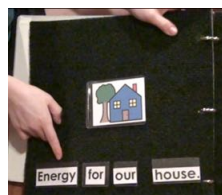
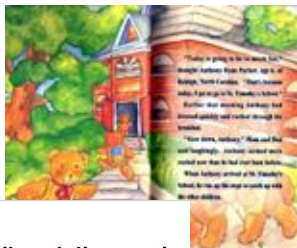
Revising, Editing, Publishing

- Writing may span days or weeks instead of all in one session
- Have others read and comment for revisions
- Edit with assistance of a scribe at first
- Publish/send and share with intended audience

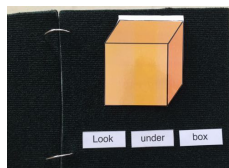
Shared and Guided Reading

- Learning to enjoy books
- Depending upon Phase of the CVI Range:
 - May be visual reading
 - May be listening
 - May be a combination
- Reduce visual complexity of books
- Object books for Phase I
- Focus on just text or just picture at one time

Reduce Visual Complexity For Literacy Activities



2
Don't eat the sock.

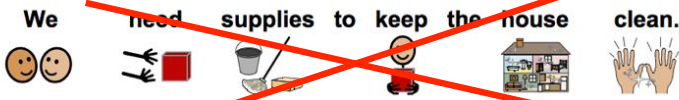


Pipe Cleaner pointers
 Partner-Assisted
 Scanning



Text Without Picture Symbols is Less Complex

~~We need supplies to keep the house clean.~~



We need supplies to keep the house clean.

Size and Spacing of Text

The weather is windy.

The weather is windy.

The weather is windy.

The weather is windy.

Window to Direct Visual Focus



Take Pictures on iPad and Highlight Salient Features

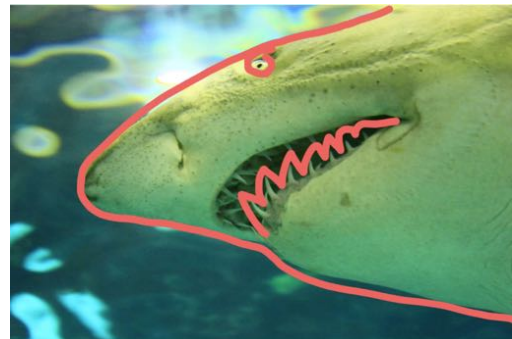


Highlighting Visual Saliency Pictures and Video



Explain Everything iPad App

Highlighting Visual Saliency Pictures and Video



Explain Everything iPad App

Splashtop - Computer Mirroring - up close



Mirror Whiteboard on iPad to bring in for closer visual inspection



Caution: outlining the shape of words - while describing salient features may add auditory complexity for some kids



Word summary: It is a two letter word. It starts with a letter that has a curve that dips down and ends in a circle.
Specific details: First letter is g. It is round and has a curve that dips down
Second letter is o: it is a short letter that is a circle.

Guided and Shared Reading/Listening means there is active participation

- Not just reading/listening to a story
- Listening is often passive and is often insufficient for learning
- Set purpose for reading/listening (change with multiple readings on different days)



Active Learning is not Just Answering Questions



My Work Phrases

My Help Phrases - "light tech" auditory or auditory plus visual scan

- Read it again
- Explain it to me
- Give me a minute to think
- Help me brainstorm some ideas
- Please get my communication book

- Involve the child in discussion, opinions, comments using AAC
- Provide options for re-reading/listening to parts as needed
- Review purpose and discuss afterwards



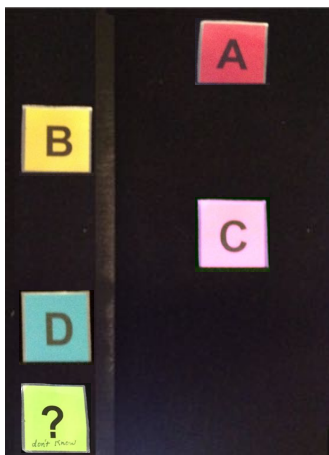
Guided Reading / Listening

- Auditory clutter from the environment and the auditory scan may mean that parts are missed with one reading
- Challenge to go back and "re-read" to find an answer
- Amount to hold in head with no visual hook
- Ways to remember the purpose of reading / listening
- Systematic Method for Multiple Choice answers



A, B, C, D
 Not Sure
 (Black Velcro®
 Board)

Scan through all answers and move "yes" answers to the right side to allow individual to narrow down options and then select their best choice



A, B, C, D
 Not Sure
 (Black Velcro®
 Board)

Scan through all answers and move "yes" answers to the right side to allow individual to narrow down options and then select their best choice

- Read it again



Testing and Direct Questions

"I don't know"
 and
 Please get my
 communication
 book

Listening Comprehension with Feedback

Listening Comprehension with Feedback

Template

Self-Selected Reading

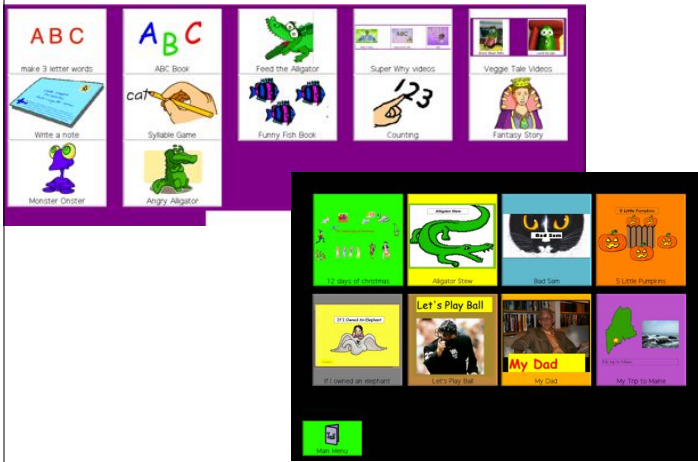


Self-Selected Reading

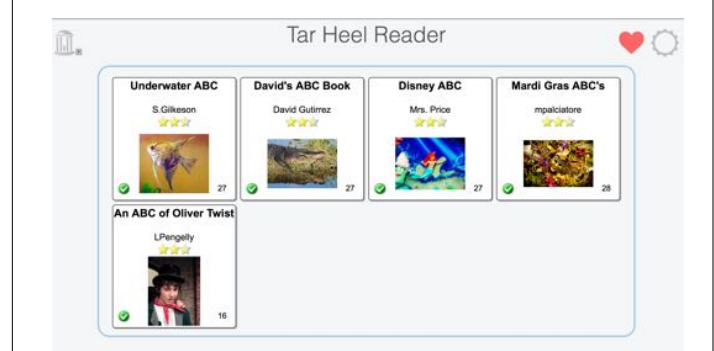
- Individual picks the book!
- List of 3 plus something else
- Electronic Launchers / Book Shelves (that scan)
- Real books - Partner reading
- Recordings of real people reading
- Record teacher or peer reading the book

Create using: Classroom Suite, Mind Express, Clicker, Boardmaker Plus, Boardmaker Studio, Clicker, Communicator, GoTalk Now, Grid, Compass, Whatever software/app you might have access to, etc.

Launchers and Book Shelves



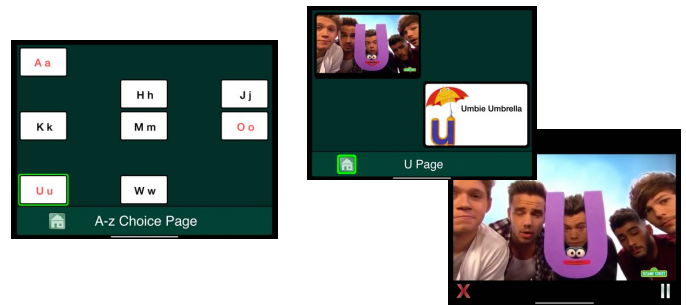
Tarheel Reader - Use Favorites and Look for Stories that Auditorally Interesting



<http://tarheelgameplay.org>



2 Switch Step Scanning Activities to Select - Listen to and Read Books

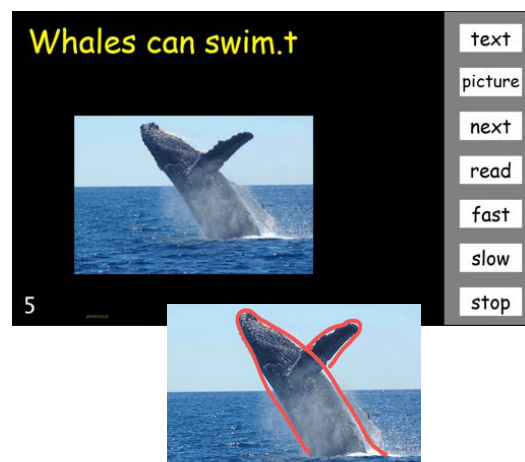


GoTalk Now

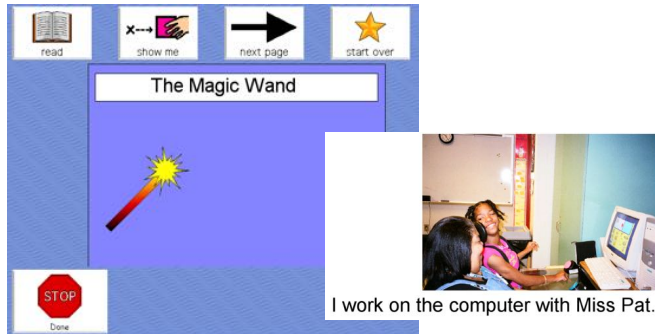
Creating Books

- Related to the Child's experiences
- Emphasis on literacy level: rhythm and rhyme
- Sound effects for turning pages forward and back
- Video clips
- Reduced complexity of visuals
- Large text, additional space between words and lines
- Digital Voice for fluency vs. Text to speech
- Control to do more than turn the page

Electronic Book on Mind Express



Provide more interaction than just turn the page

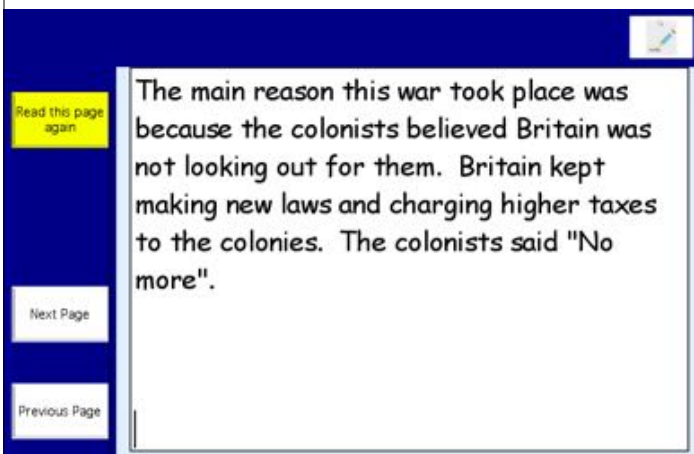


Write Books Related to the Child's Background Experiences and Interests

Study Guides for Older Students

- Need launcher or light tech way to choose
- Can be just text with limited or no pictures
- May include video or sound effects

Study Guide



Tips, Hints and Tricks to keep in mind

Work in Parallel to address all priorities!

- Communication
- Motor
- Vision



Remember:

We can't know what a child is capable of learning until we provide appropriate access and put in the time to teach them



Disclosure: Linda J. Burkhart



- Self-Employed
- Paid Consultant and Trainer
- Small Home Business (books and software activities)
- Work with children, families and teams privately
- Volunteer consulting to AT Vendors and product developers

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