


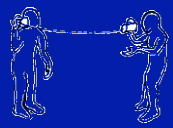

**Communication Styles:
Augmentative Communication
and Early Intervention as a
Foundation to Success**

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Facebook: <https://www.facebook.com/ACPCHBoston>




**Speech/Language/Communication:
Defined**

Speech: The motor activity or the actual production of sounds, syllables and words

| | |
|---|---|
| <p>Respiration: breath support impacts adequate loudness. Difficulty coordinating breathing will impact clarity of speech production</p> | <p>Phonation: Production of sound and pitch at the level of the vocal folds (vocal cords)</p> |
| <p>Articulation: coordination of the muscles of the face, lips, tongue and jaw</p> | <p>Resonation: richness of the voice as impacted by movement of soft palate and airflow in oral and nasal cavity</p> |



Language:

Language is a rule-based system that people use to represent their ideas, thoughts, and beliefs. It is the most complex skill acquired, demonstrated, and refined in early life.

(Werker & Tees, 1999).

Language is both expressive and receptive

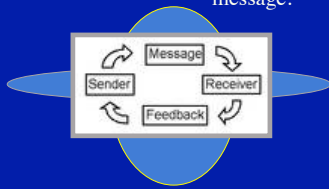


Receptive

- Receiving, comprehending and processing the information provided

Expressive

- Manipulating the rule based symbol/ representation/ linguistic code to communicate a message.



Communication:

“Communication is any act by which one person gives to or receives information about that person’s needs, desires, perceptions, knowledge or effective state. Communication may be intentional or unintentional, may involve conventional or unconventional signals, may take linguistic or nonlinguistic form, and may occur through spoken or other modes.” (1992)



National Joint Committee for the Communication Needs of Persons with Severe Disabilities

What do we know about Communication Development and Down Syndrome?

We know that it is more difficult than typical speech and language development.

WHY?



Why is speech and language development for children with Down Syndrome more difficult?

- Middle ear infection/hearing impairment
- Speech motor difficulties/ hypotonia
- Environmental restrictions
- Specific cognitive/processing difficulties
- Oral-structural issues including high narrow palate, small mouth relative to tongue




What kind of environmental restrictions?

- P
 - th
 - P
 - q
 - E
 - li
 - R
 - of
 - R
- Is a strong argument for using total communication strategies that support success with using language by providing every opportunity to communicate!*




“Our Lives Teach Us Who We Are”


- Salman Rushdie



**Vocabulary Acquisition in Children with Down Syndrome:
Is it different?**




**Syntax Development in Children with Down Syndrome:
Is it different?**

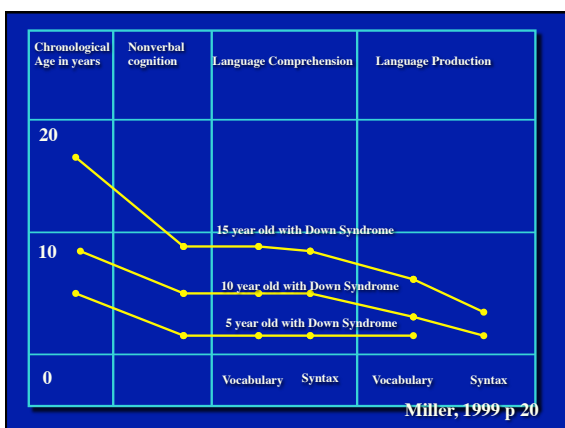


Studies suggest:

- Development of vocabulary skills in children with Down Syndrome is more advanced than the development of syntax or grammar.
- Language comprehension is greater than language production



Miller, 99



What do we know about speech and language development for children with Down Syndrome?


- Non-verbal skills are stronger than speech and language
- Natural gestures to communicate is a strength
- Vocabulary is understood slowly but steadily and becomes a strength
- Spoken production is not as good as comprehension
- Early grammar is learned slowly
- Complex grammar is delayed and keeps pace with expressive vocabulary
- Spoken production of grammar lags behind comprehension of grammar
- Because of difficulty with speech production, there is a delay in early spoken words and connected words are difficult



Children with Down syndrome show the same progression from one word to two word combinations, once they can say between 50-100 words, as other children, and they show the same progression to early grammar in their speech when they have a spoken vocabulary of 300-400 words.

Unfortunately the usual delay in reaching a productive vocabulary of 300-400 words (at 5 to 6 years, instead of at 2 to 3 years) *may compromise the ability to master fully sophisticated grammar and phonology in later speech.*

* Buckley and Bird, 2011 (access on line @ <http://www.down-syndrome.org/information/language/early/>)




If practice with language
(actually manipulating the concepts)
 is an important feature of language acquisition,
(learning when, how and why to use language)

then reduced speech intelligibility can be suggested as *part of the* cause of language production problems

(but we can support use of language through other TOTAL COMMUNICATION strategies).



Aided Language Stimulation



Goossens' (SEAC Proceedings October 2001) cited comprehension data suggesting the need to provide language models and aided language opportunities to cognitively young children.

- By 15 months toddler understands an average of 50 different words
- By 18 months 100 - 150 different words
- By 18 - 24 months 150 - 500 words - Chapman, 1978



What is total communication?

Any combination of (*depending on individual*):

- Speech and vocalizations
- Gestures
- Signs
- Body language
- Objects, photographs, symbols, other graphics
- Text
- Speech generating and/or non-electronic communication aids




Total Communication

Augmentative Communication



**WHEN DO WE USE
TOTAL
COMMUNICATION?**




RED FLAGS for needing to use
Total Communication:


- Intentionality
- Frustration
- Communication breakdown
- Increased dependence on interpreters
- Avoids interactions
- Fewer successful communication opportunities than peers



Why would we ever
deny someone the
opportunity to have
success?



**MY DILEMMA WITH ORGANIZING
TODAY'S DISCUSSION**




Sign Language

- Easy access to hands
- Usually surrounded by familiar partners who can interpret approximations
- The use of signs and gestures has often been noted to assist with easier production of vocalizations and, thus may encourage improved use of speech sounds.
- Signs and gestures can be used by others to provide an additional mode of receptive language learning. Providing language learning through a visual mode can be beneficial for communication development.



- Signs and gestures can often be used to provide clear communicative input and models when auditory attention and focus may be difficult, as when new learning occurs, fatigued, etc.
- Sign language models, in combination with verbal communication, provides an additional mode of receptive input.
**** This may be particularly valuable for new learning and for learning more abstract or complicated concepts.*
- Sign language may be used as a visual script for production and later transferred into an initiated script for expression.



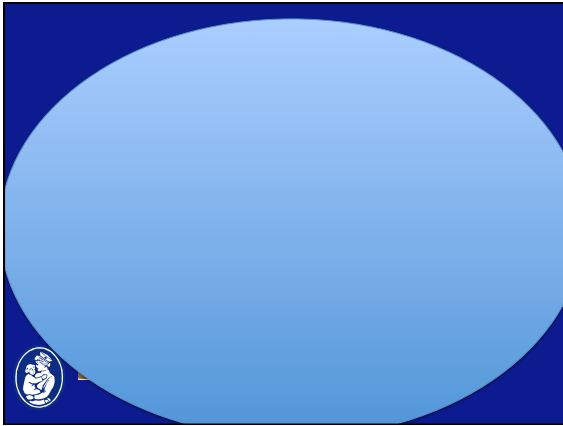




Enhancing Communication Skills of Children with Down Syndrome: Early Use of Manual Signs

Kaisa Launonen, Ph.D. Reproduced with the permission of the editor Whurr Publishers ©1996. All rights reserved
Augmentative and Alternative Communication: European Perspectives
Siglith von Tetzchner and Mogens Hygum Jensen (Eds.)
Chapter 13, p. 213-31

However, the communicative abilities of individuals with Down syndrome are not characterised solely by difficulties and weaknesses. Their pragmatic skills are often good and they tend to use compensating strategies in order to be understood: mimicry, gestures, actions, and - if possible - signing (Bray and Woolnough, 1988). Several studies suggest that it is easier for people with Down syndrome to learn manual signs than spoken words, at least in the early stages of language development (e.g. Abrahamsen, Lamb, Brown-Williams and McCarthy, 1991; Johansson, 1987; Layton and Savino, 1990; Le Prevost, 1983).



Go to: <http://aackids.psu.edu/index.php/page/show/id/6>

Watch videos of Janice Light and children with Down Syndrome at this link

Step 3: Select Appropriate Vocabulary

The next step is to select appropriate vocabulary for your child, including:

- words such as mommy, daddy, more, milk, up, tickle
- short phrases such as "what's that?", "all gone!", "fall down."
- sound effects such as giggling, "raspberry", vehicle noises associated with cars, airplanes or trains, or music.

For each context chosen for intervention, select appropriate vocabulary (that is, words or sentences), or sound effects, to expand your child's communication.

How do I select appropriate vocabulary for my child?

Watch and listen to your child throughout the day, especially within the contexts chosen for intervention.

- Make a list of the things that your child wants to communicate.
- Focus especially on those things that your child cannot currently communicate effectively.

For example, words that he or she cannot say

- Watch for opportunities to correct and be playful.


Caselli and colleagues (98)

- Children with down syndrome may end up developing gestural communication beyond what would be expected given their production and comprehension of spoken language.
- Children with DS produced more symbolic gestures and engaged in more pretending than typically developing children after reaching a mental age of approximately 17-18 months.
 - Why? They reasoned that children with DS have had longer time exposed to gestural communication because of their increased chronological age and essentially become specialists in gestural communication


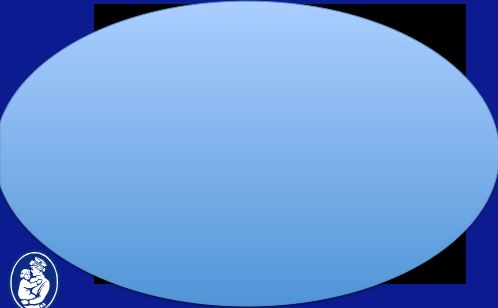
Chan and Iacono (2001)

Young children (17-19 months) used gestures as forms of intentional communication and used gestures before their use of spoken language


Language functions with gestures included: commenting, requesting and naming



Grace – 'different'



Won't My Child Be Lazy and Not Talk If I Introduce TOTAL/Augmentative Communication Strategies?



Children with Down syndrome typically demonstrate significant delays in speech development

- – As a result, they have very limited means to express themselves during the critical early years of development
- Delays in speech may negatively impact many aspects of development
 - – Functional communication
 - – Social development
 - – Language development
 - – Learning / cognitive development
 - – Literacy development
 - – Quality of life



Augmentative Communication AND SPEECH FACILITATION

Actual:

Research and Clinical Observation demonstrates INCREASE in use of speech with T.C./AAC
Seen across diagnostic categories

- * *expect a decrease in speech initially*
- * *continues as primary parental concern*

Perceived:

Increased context provided



Conclusions (LIGHT)

- Early AAC intervention did NOT inhibit speech development in young children with Down syndrome
- Early AAC intervention offered the means to jumpstart language and communication development with young children with Down syndrome
 - Increased rates of participation /turn taking
 - Enhanced semantic development
- Acquisition of first words / range of vocabulary concepts
 - Provided access to new learning
- Early preschool concepts—colors,numbers,literacy
 - Facilitated social interaction with adults and peers



Benefits of Total Communication:

- May provide communication success
- May provide a visual model
- May help reduce frustration over communication failure
- May promote/support speech
- May assist with lexical development
- May assist with syntactic development
- May provide increased social success/decrease passivity



Supporting Speech and Vocalization production

- Meaningful/functional motor speech tasks
- Associate meaning with speech sounds
- Co-active movement
- Tactile/touch cues
- Music Music Music!
- Play!
- Aided and Unaided strategies

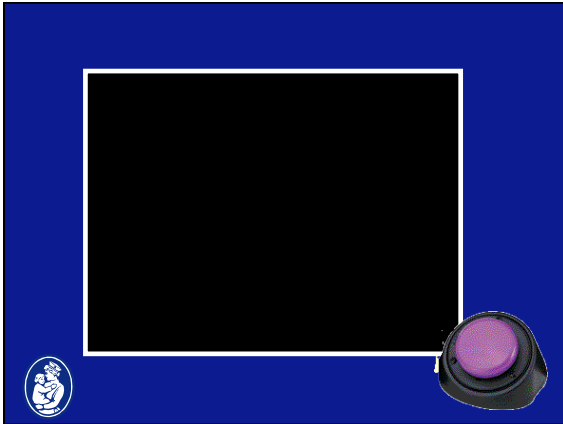


Why Incorporate Music?

Brown, 2004


- Can support social and cognitive growth
- Rhythm and melody gain and maintain attention
- Encourages participation
- Can help regulate behavior during transitions
- Repetition often incorporated






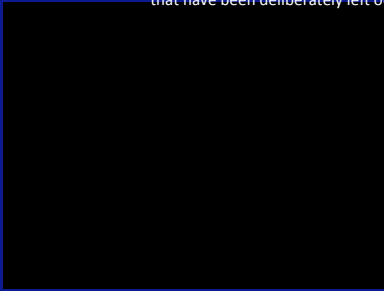
Use of visual supports with music

- Help increase attention and participation
- Increase understanding of word meanings, concepts, and sequences
- Encourage use of language for variety of functions
- Provide choice making opportunities
- Supports print awareness
- Helps make complex, abstract lyrics more meaningful






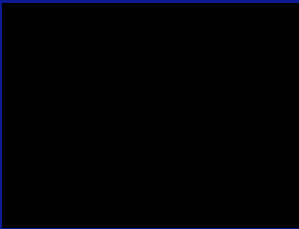
'Cloze' Procedure

A 'fill-in-the blanks activity where a learner uses clues from the context to supply words that have been deliberately left out



Touch Cues to Model
Place and Manner of Sound Production





Jordan,
Touch cues and video modeling


Aided strategies (using tools)




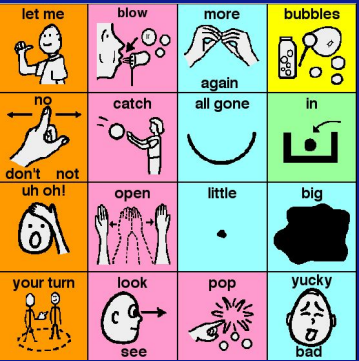
Aided Language Stimulation

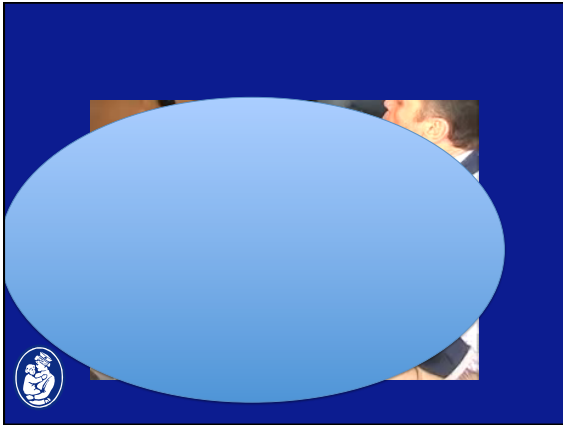
Modeling language using the tools and strategies that the child CAN use

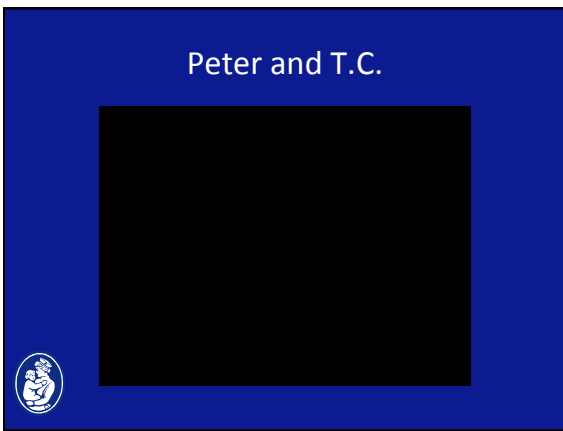
WITHOUT an expectation for child to prove competence

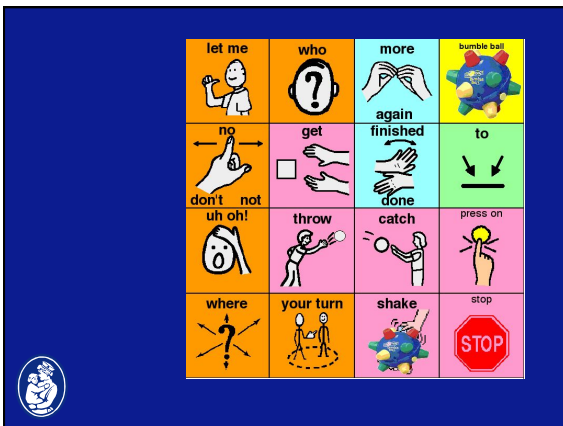


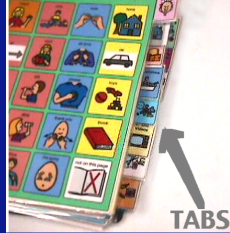












Grammar structure and color coding may assist with:

- modeling
- Understanding left to right orientation
- components of grammar

| | | | | |
|---------------|-----------|-------|--------|---------|
| Mommy | let me | blow | more | bubbles |
| Daddy | no | catch | again | in |
| Mark/ brother | uh oh! | open | little | big |
| Grandad | your turn | look | pop | yucky |
| | | see | | bad |

Behavior or Communication Using Symbols?

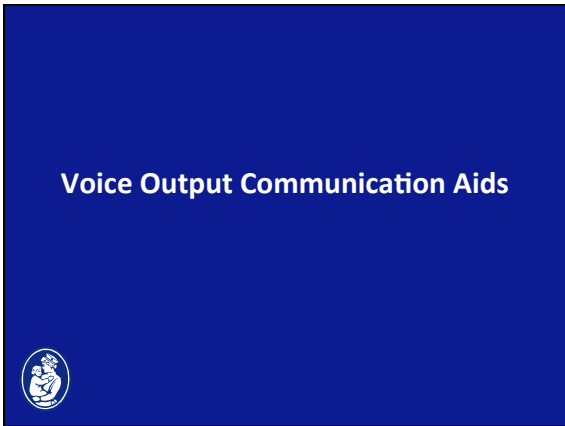
Give me something 'worth' working for....

their crackers?

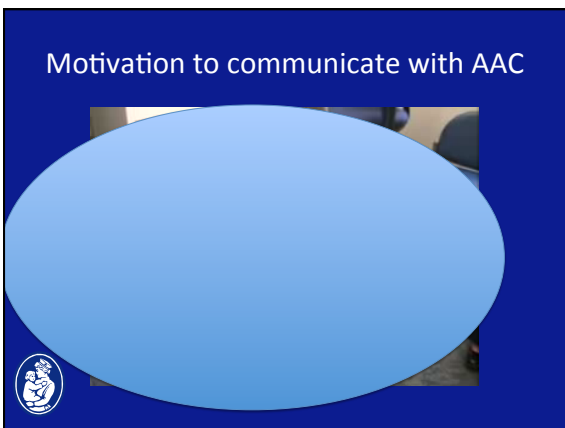
Supporting Vocabulary Beyond nouns

Teaching a language Concept by making It meaningful

y to ch/ on when ss



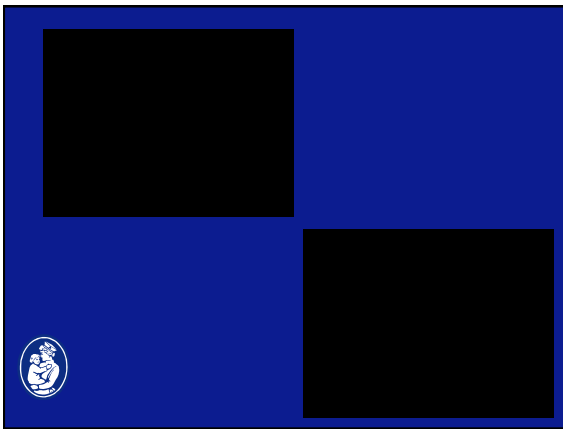




Errorless Co-construction of language

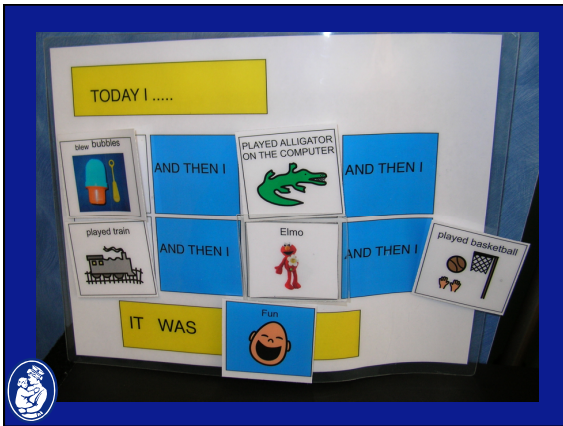
- Pile of symbols provided
- Model 'writing' a story by selecting symbols
- The sillier the better
- After symbols combined, could draw the story OR put on a show
- Refer back to your 'written' script repeatedly
- Include sight words and 'little words' in the pile.

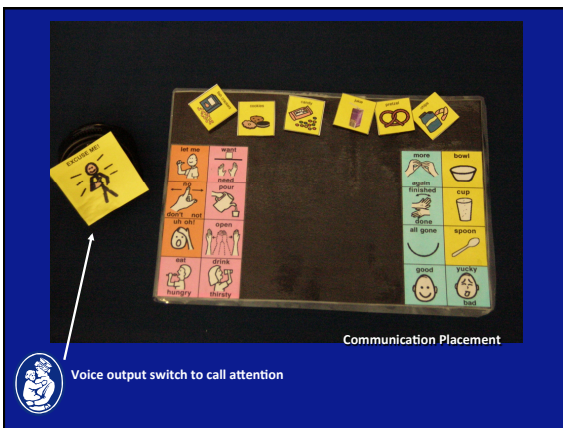




A COUPLE OF OTHER VISUAL SUPPORTS TO MENTION









Supporting Early Literacy Skills

Of course literacy is important, but **WHY** are we talking about literacy when we discuss total communication?

-books with repetitive words, phrases and predictable plots encourage speech production, sign or other strategies

-personal connection with language



repeated opportunities to manipulate language

Survey Says...

Parents of children without disability

- read to child daily
- 2/3 asked child to label pics in story
- 1/2 asked child to point to pics

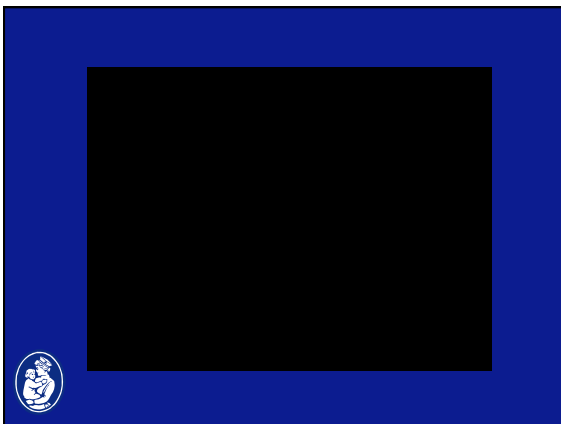
Parents of children with SSPI

- read to child 2-3 times per week
- 1/2 asked child to label pics
- 20% asked child to point to pics



Children with SSPI had fewer opportunities to practice expressive skills

- Light, Kelford and Smith 1993



Re-telling stories using symbols

Modifying Curious George

Curious George

George

George and the clock

George and the car

Curious George

George

George and the banana

George and the house

George and the tree

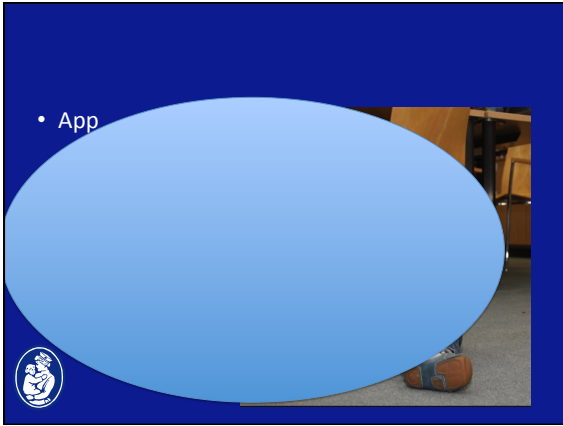
George and the sun

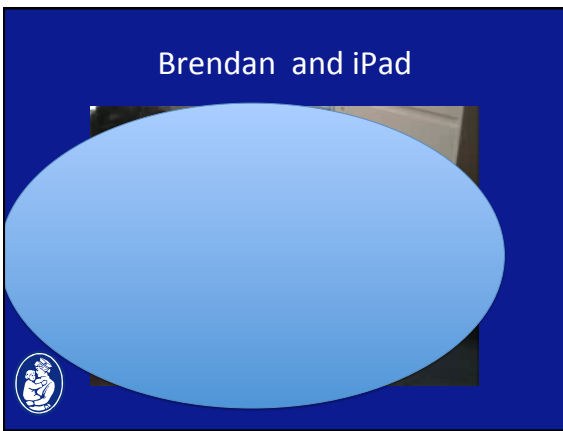
George and the moon

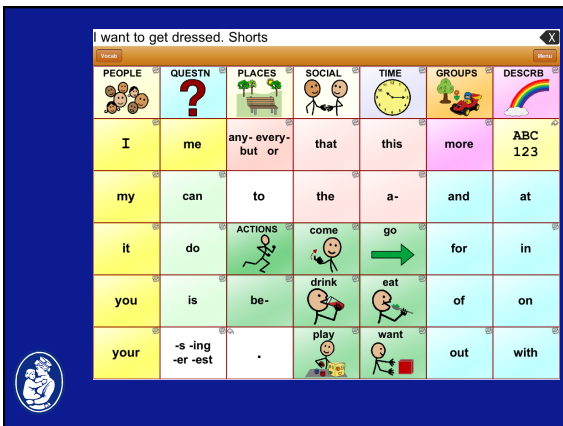
Repeat this one to each page

-Opportunity to be an active and successful participant in the reading experience

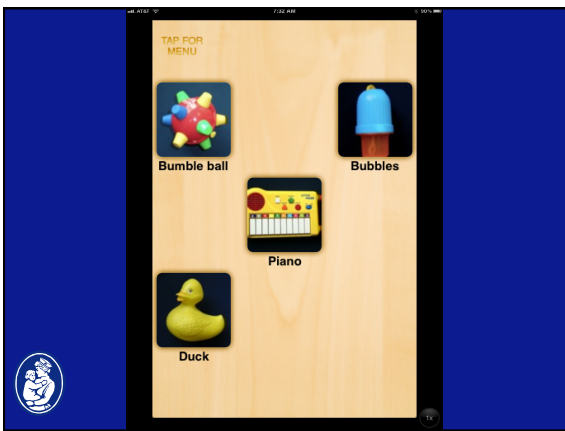
| | | | | |
|--------|------|-------------------|-------|----------|
| Let me | sing | Twinkle Twinkle | fast | Yay! |
| Let me | | Wheels on the Bus | slow | more |
| | | Itsy Bitsy | loud | all done |
| | | If You're Happy | quiet | |

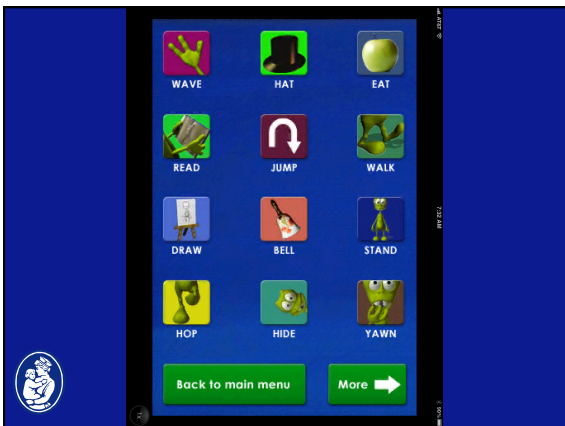














Pogg as motivator




Select resources

Web:

- <http://sackids.psu.edu/index.php/page/show/id/6>
- <http://www.down-syndrome.org/information/reading/early/>

Text:

- Miller, et.al Improving Communication of People with Down Syndrome. Brookes, 1999
- Kumin, L., Early Communication Skills for Children with Down Syndrome Woodbine House, 2003



THANK YOU TO THE MANY CHILDREN AND FAMILIES WHO ALLOWED ME TO VIDEO TAPE AND USE THE POWER OF THEIR SUCCESSES FOR TEACHING!