Functional Strategies to Increase AAC Use in the Home

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Introduction

1. Background
2. Overarching perspective
3. Overview of seminar:
- Barriers to effective AAC use
- SLP role
- Recommendations and strategies
- Questions and answers, discussion

Why is the home environment an important consideration?

1. A SETT model of evaluation considers all of the student's communication environments, including the home.
2. Ascertaining the family's expectations, capacity and communication routines is necessary for successful introduction, implementation and follow-through.
3. The home environment provides rich opportunities for a wide variety of communication functions and interactions.
4. Behaviors are a very efficient and effective way to communicate. If symbolic communication is not introduced and utilized, using behavior to communicate may become the preferred and entrenched methodology.
5. Children learn values in the home. Their attitude about communication and an AAC system will be directly influenced by the parents. If a parent is either covertly or overtly undervaluing a communication system the child will incorporate this into their readiness to use a system.
6. If a child experiences negative associations with using a communication system, refusal and rejection is likely.
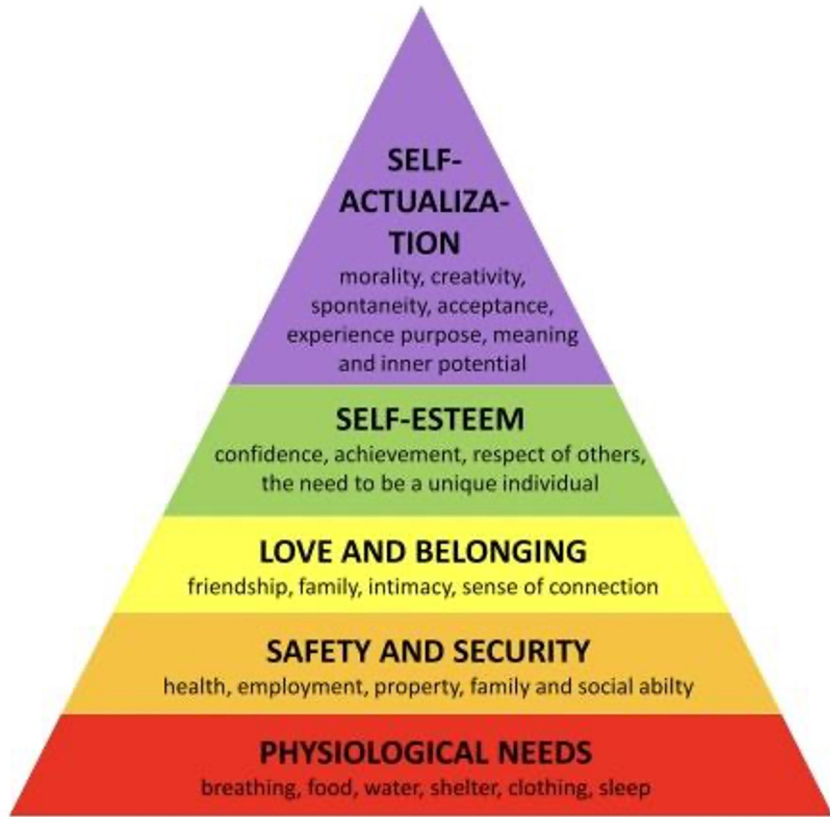
Maslow's Hierarchy of Needs

Capacity: A factor in determining viability of AAC use

If parents are just trying to get through their day, there will not be much reserve for acquiring new or using existing skills.

In the home environment what does capacity entail?
Factors to consider may include:

- Stability of living situation (being unhoused, immigration status, domestic violence, relationship conflicts, alcohol and/or drug dependence, single-parent status)
- Financial stability (income, job instability/loss, need for multiple jobs)
- Mental and/or physical health of parents/caregivers
- Pre-existing conditions (autism, learning disability, low literacy or education level may be present in family members)
- Resilience, coping skills, life skills
- Presence of siblings/other children, siblings/other children having special needs

Capacity con't

- Burden of care

Child/children having complex medical, physical, communication and/or social needs

Complex needs impacting all aspects of ADLs and everyday functioning

The ongoing needs potentially impacting a caregiver's physical well-being, emotional state and wherewithal to handle additional challenges

Amount of support and respite available to parents/caregivers

Routines present in the home

Capacity con't

- Parenting skill
  - Knowledge, experience
- Parenting style
  - Expectations, discipline, reward structure, limit setting, consistency, patience
- Interaction style
  - Amount, type and quality of interactions; demonstration of affection
- Communication style
  - Presence of ongoing labeling, expansion of utterances, responses to communication bids
- Richness of language environment
  - Degree to which stimulating language activities occur

Parent concerns/beliefs re: AAC

1. Social stigma
2. Familial or cultural practices, societal influences
3. AAC is not necessary-their child will talk in time
4. AAC is not necessary-communication needs are being met
5. AAC is for use in school, not at home
6. Child will rely upon the device and not develop spoken language
7. Use of a communication device would be too complicated
8. Previous "negative experience" with AAC
9. Unknown/unvoiced concerns

Parent perceptions/misconceptions

1. Communication device could also be used for preferred apps and programs
2. Communication device is a panacea (will solve all communication issues)
3. Communication device will talk for their child
4. Developing functional use of the device would be quicker
5. Results would be more immediate, extensive modeling would not be needed
6. Communicating with device would not be so effortful and inefficient
7. Role of parent as communication partner would not have to be so extensive
8. Finding ways to use the device would be easier
9. The cost-benefit ratio is unacceptable
10. Access to the device is contributing to less communication
11. Child would have a strong interest in using the device

Problems parents report

1. Child doesn't want to use the device
   - How do we know?
     - Child throws, pushes aside the device
     - Attempts to navigate off the communication app
     - Walks away, leaves the activity
     - Vocally rejects

Why does the child not want to use the device?

- Technology is for entertainment purposes, not communication
- Using device results in frustration, being overwhelmed
- Interactions with the device have been non-affirming, punitive, boring
- Requirements for use exceed abilities

Reported problems con't.

2. Child selects random icons repeatedly, "stims" on the device

Why might the child do this?

Types of exploration: selecting icons to:

- Understand their meaning
- Understand how the device works (including navigating off the home page to locate other/preferred sites)
- "Babble"
- Obtain sensory input (auditory or tactile)
- Engage with the device in a way that is entertaining i.e. selecting sequences of words and listening to the auditory feedback for its humorous value
- Act on the device in a physical manner to obtain proprioceptive input (take iPad out of its case, attempt to remove batteries, disassemble

Reported problems con't

3. Technical difficulties with the device

- Technological breakdowns
- Inability to troubleshoot/solve technological issues
- Insufficient training in device set up, management, editing, customizing vocabulary
- Having a backup AAC system
- Inadequate resources and support

Reported problems con't.

4. Inadequate ideas to use the device meaningfully

Parents want (and need):

- Step by step instructions
- Solutions for when their child doesn't appear interested or the activity is not working
- Resources, support, ideas and materials to effectively use AAC

5. Parent's needs and input not considered during the decision-making process.

Feelings

Speak | Clear | Delete | Share

Back

Core Words

QuickFires

Topics

Keyboard

Dashboard

happy	sad	mad	okay	love	sick	bored	hungry	All Word Lists
thirsty	tired	excited	frustrated	silly	great	good	bad	Little Words
afraid	uncomfortable	hurt	surprised	scared	fine	angry	embarrassed	glad
sorry	yucky	confused	lonely	cold	hot	funny	mean	proud
nice	terrible	like	hate	worried	lazy	exhausted	stupid	stressed
awful	disappointed	dizzy	upset	nervous	grateful	annoyed	shy	Word Forms
well	feel	feelings						

Common emotions experienced by parents/caregivers

At baseline, what emotions might parents be feeling?

- Alone, angry, anxious/stressed, in denial, depressed, distracted, exhausted, fearful, grief, guilty, helpless, hopeless, overwhelmed, traumatised

With the introduction of an AAC system, how might parents be feeling?

- Competent, encouraged, hopeful

When expectations versus realities of the AAC device are experienced and problems arise, how might parents be feeling?

- Avoidant, burdened, confused, disappointed, embarrassed, frustrated, inadequate

Feelings

Just as we strive to have our students/clients be regulated and working optimally, we want our parents to be similarly supported and working in a zone of possibility. We just discussed many negative emotions but many positive feeling states are also possible.

- Advocacy, appreciation, competence, confidence, creativity, expertise, hope, joy, openness, pride, protectiveness, relief, resilience, sense of purpose, tolerance
- To ensure successful implementation, we want to anticipate and plan for potential difficulties that could sabotage AAC use

Family systems

1. We have been discussing the factors contributing to families:
   - Choosing to not be provided with an AAC system for home use
   - Discontinuing use or under utilizing an AAC system
1. Family systems are fragile ecosystems with an attempt to achieve and maintain homeostatic balance.
2. Introduction of an AAC component may disrupt this equilibrium because it is perceived as being too burdensome or ineffective.
3. Even without the introduction of an AAC system, parents may not possess the complex array of skills required for enhancing language stimulation; providing modeling, encouragement and feedback; and creating opportunities for interaction.

Addressing family barriers

1. Many of these barriers are outside our scope of practice and sphere of influence.
2. We can provide recommendations, referrals and resources.
3. Just as we assess our clients/students, we need to assess our families' capacity, preparedness and potential for follow-through.
4. Barriers need to be considered in our AAC recommendations and implementation plan.
5. There are many factors that we have absolutely no control over. The next portion of today's seminar will focus on those items that we do have agency over.

So, what do we have control over?

1. Ensuring parents that their input is vital
2. Minimizing any power differential or other issues that may prevent a parent from disclosing pertinent information (i.e. that an older sibling had an device that is no longer used)
3. Addressing expectations, misperceptions and instruction with verbal, written and visual information with parents able to verbalize understanding (i.e. parents understanding that communication proficiency will involve years of hard work)
4. Assessing the parent's level of preparedness, buy-in and ability
5. Uncovering and managing objections
6. Determining what the parent will need for AAC to be successful in the home
7. Educating parents regarding language acquisition, communication functions

Importance of communication functions

1. Communication functions form the framework for all communication.
2. The single most effective means of laying the groundwork for a successful home based AAC program is parents understanding the range of communication intentions possible for their child.
3. Many students who have not had access to a communication system have a limited range of communicative intentions and ways to express a variety of language functions.
4. If a child is limited to primarily making requests, the likelihood of AAC abandonment is high. The reason: requests are typically concrete in nature with the item often clearly visible in the environment. The request is able to be anticipated, pointed to or gotten without symbolic communication.
5. If parents are focused on only meeting the child's needs and preferences, the child's range of communication functions may remain limited.

Communication modes

Behavior (self-harm, tantruming, avoiding activities, leaving, screaming, physical aggression: hitting, biting, scratching, pushing, pulling hair, throwing items)

Whole body language (grabbing, reaching, pushing items away, turning away from a person or activity)

Body position changes

Gesturing, signing

Facial expressions (smiling, grimacing, pouting, glaring)

Looking at a person or in the direction of a preferred item

Pointing

Choosing between two or more preferred items

Hand guiding

Getting items independently

Vocalizations (differentiated: able to discern meaning from the vocalization or undifferentiated/multi-purpose)

Change may be difficult

1. Parents are typically operating on a short term perspective. For the most part, they are just trying to get through each day.
2. Parents may believe/hope that their child will outgrow the negative behaviors (much like a typical child outgrows tantrums) and establishing communication will be easier when their child is older.
3. Parents frequently have not projected their child or themselves into the future. It is hard for them to imagine that their 4-year-old child will be using the same means of communication as an 18-year-old.
4. As SLPs, creating an awareness that establishing symbolic communication is essential now, is a critical entry point to discussing the relevance and need for AAC.
5. Using AAC is synonymous with any form of behavior change. There needs to be buy-in, commitment and a will to undertake the plan. Whether it be eating a healthier diet, getting more exercise, being more organized, etc., the initial phase is when there is the most optimism and possibility for change. If barriers are encountered at this stage, the likelihood of the change becoming an established routine diminishes.

Visioning

1. When asked, how does your child communicate, parents typically reply, "I know what they want".

   This is a prime opportunity to ask parents, if there are times when they are not able to figure out what their child wants and make the case for providing additional means of communication.

1. Asking, if your child could talk, what would you want them to tell you?

   Answers typically include: having a child be able to communicate:

   I love you, liking or not liking something, being in pain, how they feel, what they did in school, using polite forms such as please and thank you

   Our goal is to have parents be able to consider what their child may be capable of if AAC is provided. We don't want to talk parents into anything, we want them to see that there are unmet needs and possibilities.

Evaluation considerations

Multiple factors impact recommendations, implementation plan, and potential outcome.

1. Ascertain potential home barriers, parent interest and obtain buy in
2. Perform a thorough developmental history including medical diagnoses, educational eligibilities, previous AAC use
3. Obtain a thorough interest inventory
4. Employ a team approach. In order for the child to be successful, extensive exposure, instruction, practice and opportunity will be required. A wide variety of communication partners are necessary.

   The average 18-month-old has been exposed to 4,380 hours of oral language at a rate of 8 hours/day from birth. A child who has a communication system (AAC) and receives speech/language therapy 2 times/week for 20-30 minutes will reach the same amount of language exposure (in their AAC language) in 84 years.   Jane Korsten, SLP

Collegial consultation

- If a school-based practitioner, determine if the student is receiving SLP services in the community, obtain an ROI, establish if an AAC evaluation is underway, coordinate services
- If an early childhood practitioner, ascertain school practices i.e. a systems 1st/MTSS service delivery model, coordinate recommendations
- If a clinic-based practitioner; obtain an ROI; confirm AAC status; ascertain school practices i.e. a systems 1st/MTSS service delivery model; note classroom behavior and skills in pre-literacy, literacy, academic and symbolic equivalency; determine if skills demonstrated in the clinic setting are consistent with those in the academic setting

Evaluation considerations con't

4. Analyze speech, language (primary and current communication modes), social language (play behavior, level of engagement, reciprocal exchange, participation in routines, turn taking), memory skills

5. Establish a communication level (DAGG-3, Communication Matrix) and goals consistent with a predicted level of ability.

6. Determine motoric access

Are there gross and fine motor impairments?

Is the student able to manually select icons on a device or will another access route be required? When specialized access is required, working with OT and PT is essential.

Will additional equipment be necessary? (i.e. key guard, wheelchair mount, slant board, device kickstand)

Does location of the device affect access i.e. at midline versus placement to right or left?

7. Consider additional variables such as: arousal, initiation, attention, processing, sensory needs, levels of cueing and assistance, physical presentation and visual-spatial-perceptual skills

Arousal
___alertness ___vigilance

Initiation
___inhibition ___execution of tasks ___forward progression ___persistence ___level of assistance

Attention
___sustained ___selective ___divided ___auditory ___visual ___allocation ___internal distractibility ___external distractibility ___impulsivity ___diagnosis of ADD or ADHD

Processing
___depth ___speed ___capacity ___buildup ___fatigue ___input ___output

Physical Presentation
___posture ___midline orientation ___head position ___overt head movement ___position of materials ___physical complaints(___blurred vision ___double vision ___words move around page ___eye strain/tiredness ___burning, itchy or watery eyes ___rubs eyes ___closes/covers one eye ___squints ___mental fatigue ___headaches) ___glasses(___nearsighted ___farsighted)

Visual-Perceptual-Spatial Skills
___acuity ___accommodation ___eye teaming(___convergence ___divergence) ___ocular motor skills(___fixation ___saccades ___pursuits ___scanning ___tracking) ___figure-ground ___form constancy ___part-whole relationships ___spatial relations ___visual integration/ closure ___right/left awareness(___laterality ___directionality) ___non-linguistic transpositions/inversions ___visual fields(quadrant neglect: ___upper ___lower ___left ___right)

Definition of Vision Terms

1. Visual acuity	Sharpness, clarity of vision (using a Snellen chart at 20 feet, near vision at 16 inches)
2. Accommodation	The ability of the eye to change focus from distant to near objects and vice versa
3. Eye teaming	The ability to use and aim both eyes in a coordinated manner
4. Binocular fusion	Fusion of two separate images from each eye into a single image
5. Convergence	The ability to turn eyes inward to maintain single vision when looking at objects up close
6. Divergence	The ability to turn eyes outward to maintain single vision when looking at distant objects
7. Tracking	The ability of the eyes to move quickly and accurately (ocular motility)
8. Fixation	The ability of eyes to hold a steady gaze and not move off a target
9. Saccades	The quick voluntary change in fixation from one target to another (accurate eye jumps)
10. Pursuits	Smooth eye movements to note the speed and direction of a moving target
11. Scanning	The ability to use vision to search in a systematic manner

Definition of Visual-Perceptual Terms

1.Perception	The ability to see and interpret the visual information in the environment.
2. Visual motor integration	Coordination of hand movements based upon the perception of visual information
3. Visual discrimination	The ability to notice detail differences such as shape, size, color or other dimensional aspects
4. Form constancy	The ability to perceive positional aspect differences and recognize objects when they are in a different orientation or format
5. Figure ground	The ability to focus on a selected target and screen out or ignore irrelevant images
6. Spatial relations	The ability to recognize the positioning of objects in space
7. Visual closure	The ability to recognize an object, letter or number without seeing all of the object
8. Visual sequencing	The ability to see objects in a particular sequential order
9. Visual memory	The ability to remember forms (letters) and sequences of forms (words) and recognize them quickly when seen again

Questions to consider?

1. Do we have sufficient knowledge of visual-perceptual-spatial skills in order to make a decision about a communication device that relies on these skills?
2. Audiological screening is required prior to the onset of all SLP services and an ENT evaluation prior to instituting voice treatment is best practice.
3. AAC is a visual-based language system that currently has no best practice recommendations or requirements prior to or as a component of an AAC evaluations.
4. Do we have sufficient skill in recognizing when visual-perceptual-spatial deficits are impacting use of a communication application?
5. Are there situational variables present in other settings that increase cognitive, linguistic, social and sensory demands thereby taxing processing load?
6. Being aware of visual-perceptual-spatial deficits is particularly critical when our recommendations for a device utilizes a motor planning approach with a large grid size.

Quality of AAC evaluations relies on:

1. Data obtained through file review, parent interview and observation and staff interview
2. Analysis of all communication environments
3. Assessment and consideration of all domains that may influence device recommendations
4. Experience, flexibility and observational skill of the evaluator

Professionally, critical and life altering decisions are frequently required. Determinations related to dysphagia, rehabilitation candidacy, and AAC can entirely influence the trajectory of an individual's life.

I want to make sure I have considered every possible variable when I am making these impactful decisions.

The quality of my AAC evaluation is a variable that I do have control over. I want to make sure I get it right.

Summary thus far: review of those:

1. Factors contributing to parents:
- Being resistant to wanting an AAC system for their child to use in the home
- Under-utilizing a system and not following recommendations and suggestions
- Abandoning use of the AAC device

1. Evaluation considerations that contribute to:
- Vocabulary acquisition
- Current and long-term use of the device
- Degree to which an individual may develop communicative competence
- An individual reaching their full potential

AAC guidelines

1. Ensure that parents have an active voice during AAC trials
2. Address all of parent's stated concerns
3. Determine parent's goals and expectations
4. Plan for and troubleshoot projected, potential concerns
5. Obtain input from parents regarding home routines, child preferences/favorites, vocabulary to focus on
6. Provide verbal, written and visual information and hands-on demonstration with return demonstration from parents
7. Refer to current communication modes and communicative intentions to initiate/implement AAC
8. Meet the parents at their current ability level which may entail merely increasing communication interactions in the home (with or without the AAC device).

AAC guidelines con't

9. Create opportunities for the child to recognize the power and potential of AAC. An AAC user who feels a sense of increased agency with symbolic communication will be more likely to use their device.

10. Assist the student in developing the understanding that symbols represent ideas, people, places, actions, things and that using these symbols can affect the behavior of others in the environment.

10. Parents may feel daunted by the AAC device and their responsibilities, ensure that initial activities are successful and that the parent feels empowered.

11. Determine if a second device or low tech version will be needed for modeling.

12. Use low-tech activities to make the device "come alive"

Standard language enrichment recommendations

Talk to your child as you care for him or her throughout the day

Read colorful books to your child every day

Tell nursery rhymes and sing songs

Teach your child the names of everyday items and familiar people

Teach your child that words form groups i.e. foods

Take your child with you to new places and situations

Play simple games with your child such as "peek-a-boo" and "pat-a-cake"

Talk to your child about everything you're doing when you are together

Talk simply, clearly, and slowly to your child

Talk about new situations before you go, while you're there, and when you return home

Look at your child when you are speaking

Describe what your child is doing, feeling, hearing

Respond to and praise all your child's efforts to communicate

Encourage your child to make choices

AAC modeling layers

If the child joins in and starts using the device, it's icing on the modeling cake at any layer!

Exploration — Student readily and frequently joins in when you're modeling. Student explores new or unfamiliar vocabulary in the device and looks to you to assign meaning. This layer looks like an AAC conversation.

Acceptance — Student expects you to model when you're there. He/She will look to the device to cue you to model language that's useful to the situation.

Try it — Student is engaged and interested. At this layer, you're seeing the student start to touch the device and look for your response.

Curiosity — Student watches to see what you're modeling.

Ac**K**nowledge — Student will occasionally glance at the device IF he/she hears something interesting.

Exposure — Student tolerates YOUR use of the device in his/her presence, but seems to pay no attention.

Child joins in and uses device

AAC Modeling Layers

www.speakforyourself.org

"But my student doesn't look when I'm modelling"

Paying attention and AAC

Remember paying attention looks different for different people

Looking and Listening

Some people struggle to look and listen at the same time. So, in order to listen to what you are saying, they have to look away.

Paying attention and sitting still

Some people struggle to pay attention while they are sitting still – so they have to move while they are listening.

And.....sometimes they aren't paying attention!

Paying attention and moving away

Some people are paying attention but then they have to move away and take time to process what you've said

Paying attention and learning to model AAC

In the beginning, when we are just learning to model AAC, we need to remember that right at the very beginning of the process it's all about you learning the system anyway – so it doesn't really matter if your person is engaged or not until you are a confident user of that AAC system.

Implementation plan (initial vocabulary)

1. Encourage enhanced communication during routines and activities that are already taking place within the home i.e. at mealtimes
- With parent's input, choose an existing activity, suggest and collaborate on possible vocabulary to model, do the activity together, model vocabulary for the parents and have parents practice
- If visuals have been used previously, show parents where the icon is located on the device
- If the target word is not on the device, show parents how to edit and add the word to the device
- Demonstrate the wide range of potential communication functions and vocabulary to use during mealtimes

??Which words could be used during snacking with crackers?

Implementation plan con't

2. Start with vocabulary that the child is already communicating non verbally or non symbolically.

- A behavioral form of communication indicates knowledge of the concepts in question
- Concepts that are routinely expressed, typically demonstrate strong familiarity and high need
- Possible communication functions being expressed include: requesting, requesting continued or repeated action, self advocating, gaining attention, asking for help, refusing/rejecting, making choices, directing

?? What are some examples of words that a child may routinely express behaviorally or nonverbally?

Implementation plan con't

3. Utilize the child's interests

- Choose one core word related to the child's favorite activity, item, toy, place
- Build awareness that the icon represents the favorite item
- Develop connections to additional vocabulary words associated with the item
- [My typical recommendation is to avoid digital media unless it is literacy based. If being used with videos for example, parents can model comments and reactions such as cool, awesome.]

Implementation plan con't

4. Utilize the actions pages

- I try to incorporate physical movement into an activity whenever possible. Pairing the physical movement with the icon and verbal representation creates strong associations and supports learning and memory.
- Actions are easy to model and demonstrate. They occur naturally throughout the day.
- Certain actions encourage the AAC user and communication partner to be silly and self expressed. Many children enjoy selecting an icon and having their parents or siblings act out the action.
- Activities such as charades promote engagement and turn taking.
- Action vocabulary and potential activities are appropriate for most age groups.

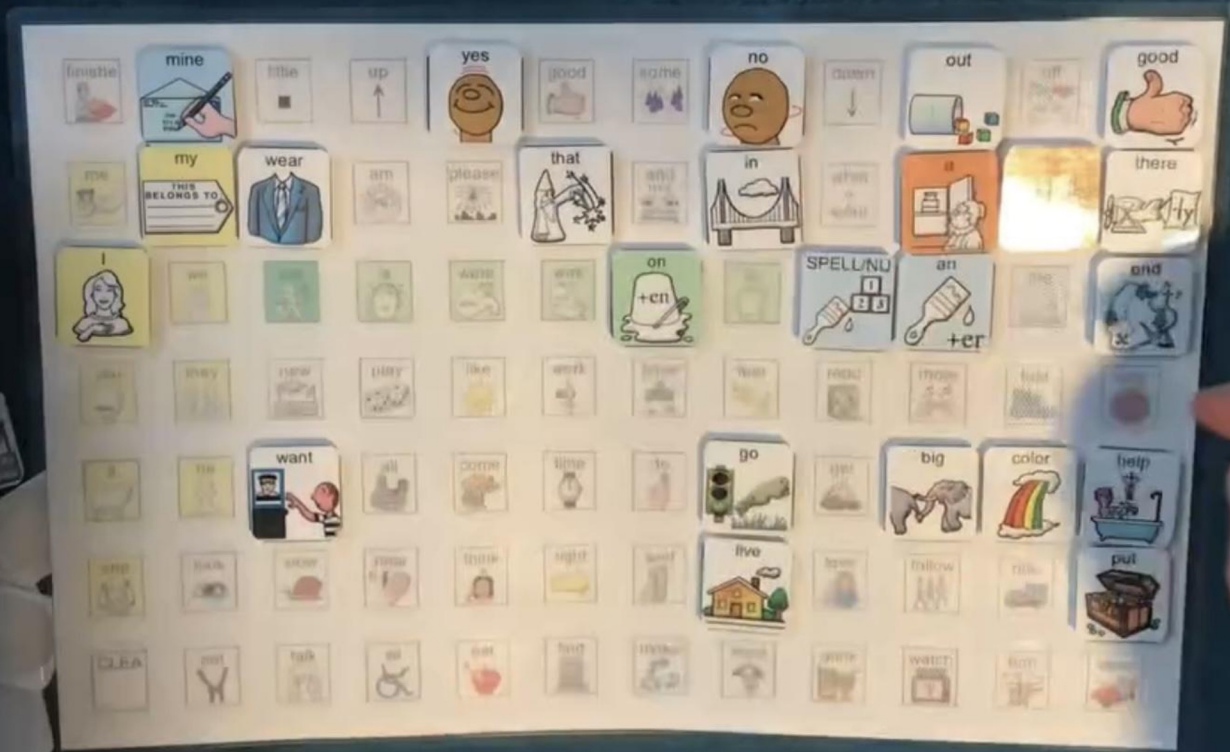|						
answer	ask	blow	catch	color	cry	dance
fall	find	fold	forget	hear	hug	jump
kick	kiss	learn	leave	line up	live	meet
paint	pray	pull	push	remember	run	say
share	shop	show	sing	smell	speak	squeeze
stand	talk	throw	wait	walk	wear	
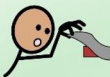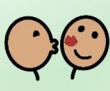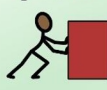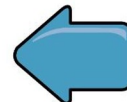
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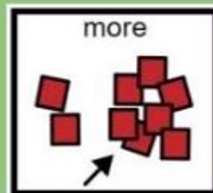
Picture Books that feature AAC devices and AAC users

1. "A Day with No Words " by Tiffany Hammond
2. "Something to Say" by Eden Molineux (Author), Nathalie Beauvois (Illustrator)
3. **AAC Rhyme time** by Amanda C Hartmann (Author), Nanhee Ha (Illustrator)
4. **Me and My AAC** (**Spectacular Spectrum Book Series**) by Tabitha Cabrera (Author), Michael Barnett (Illustrator)
5. **Lucas the Lion Loves The Tiny Talker**
6. *Eddie the Elephant Has Something to Say* by Allison Johns
7. *Artie is Awesome* by by Deidra Darst
8. **A Voice of Her Own** by Lois Yong (Author), Sarah Yong (Author)
9. Do You Talk the Way I Talk? by Tabitha Cabrera (Author), Michael Barnett (Illustrator)
10. **All About Core: An Alphabet Book for Emerging Readers** by Rebecca Eisenberg (Author), Harry Pixel (Illustrator)
11. **How Katie Got a Voice (and a cool new nickname)** by Patricia Mervine
12. I Talk in Different Ways by Amanda C Hartmann (Author), Nanhee Ha (Illustrator)
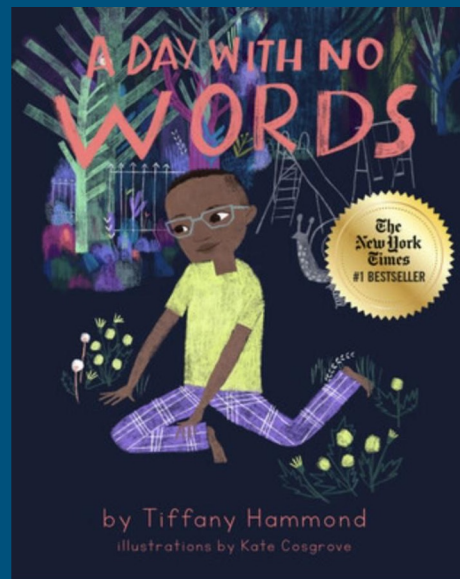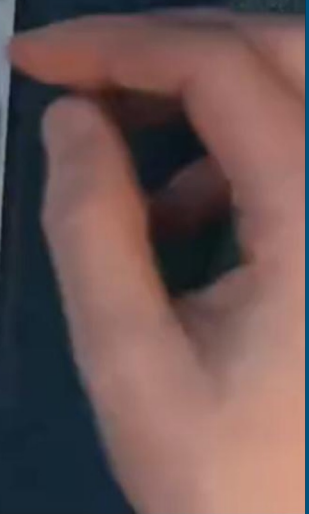
A DAY WITH NO WORDS

by Tiffany Hammond
illustrations by Kate Cosgrove

The New York Times #1 BESTSELLER

Sentence starters I + verb + ___

Conclusion, question and answers