Empowering Voices: Using AAC to Support Literacy Skills in Developing Communicators

Charting the Cs
Conference 2025:

To Literacy and Beyond

Cooperation
Communication
Collaboration

April 29, 2025

Jen Erickson

Chloe Converse

Who are we?

Jen Erickson - Speech language pathologist who has worked with students aged 5-18 with a focus on AAC. Experience consulting and supporting SLPs and students who use AAC as well as develop and teach AAC courses for graduate students.

Chloe Converse - Speech language pathologist who has worked in the pediatric clinical setting and public school setting. Experience working with students with complex communication needs.

Currently, we both work at Bridge View School in Saint Paul which is a federal four level programming serving students who are autistic, have developmental cognitive disabilities, and those who are complex communicators.

Learning Objectives

- Name at least two communication systems (low, mid, or high tech), that might be used by complex communicators during classroom literacy activities

- Demonstrate how to implement at least one AAC mode to increase student participation and engagement in classroom literacy activities

- Identify at least one resource that can support the use of Augmentative and Alternative Communication (AAC) in literacy-based activities

What is Augmentative and Alternative Communication (AAC)?

AAC encompasses a variety of communication modalities used for expression of communication including the following:

- manual signs
- **gestures**
- finger spelling
- tangible objects
- line drawings
- picture symbols
- letter boards
- **speech-generating devices**
- (American Speech-Language Hearing Association, n.d.)
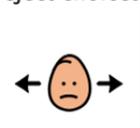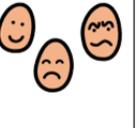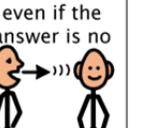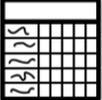
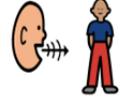# What is Augmentative and Alternative Communication (AAC)?

AAC is **augmentative** when used to supplement existing speech, **alternative** when used in place of speech that is absent or not functional, or **temporary** as when used by patients postoperatively in intensive care (Elsahar et al., 2019).

AAC falls under the umbrella of Assistive Technology (AT)

You might be considering AAC if someone…

- Doesn't have a way to express wants and needs
- Uses 1-2 word phrases
- Speech consists primarily of echolalia
- Can't communicate about things not in the immediate context
- When tired, sick, or upset intelligibility is impacted
- AAC strategies are needed for clarification for verbal communication
- Speech is hard to understand over the phone or video chat
- Does not initiate speech
- Uses maladaptive behaviors instead of speech to communication
- Specific ongoing health or medical needs

Communication Bill of Rights

From the National Joint Committee for the Communicative Needs of Persons with Servere Disabilities (1992). Guildlijnes for meeting the communication needs of persons with servere disabilities ASHA 34/SUppl 71. 2-3, adapted by K Ahern MSEd.

# Who are those with complex communication needs (CCN)?

Someone with complex communication needs (CCN) demonstrates difficulty and challenges in daily interactions due to limited use and understanding of natural speech

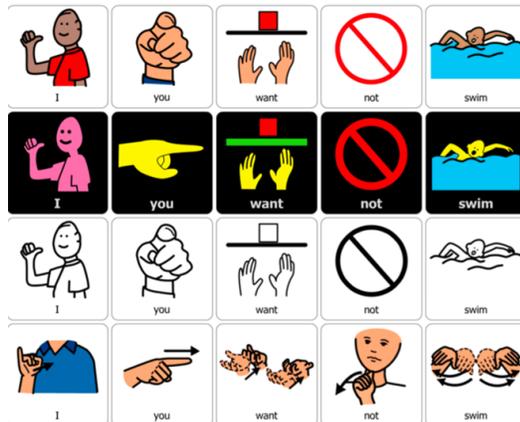- May see higher receptive language skills

PRESUME
COMPETENCE

No-Tech AAC

Use of your body to communicate - signs, gestures

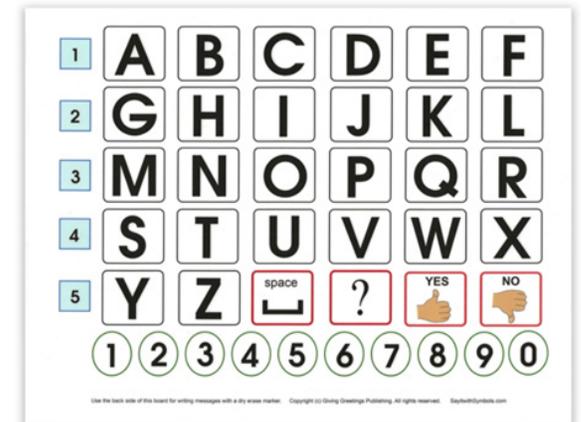
wave

give me a minute

thumbs up
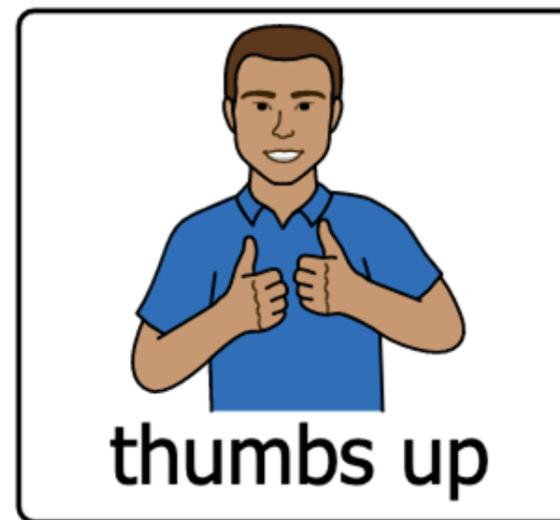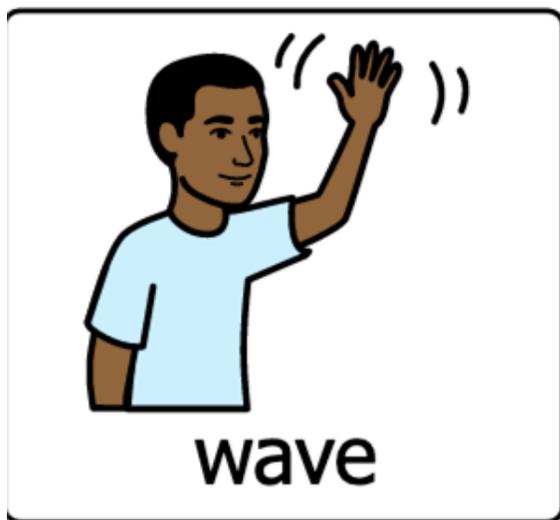
Low-Tech AAC

Non-electronic equipment or tool used outside of one's body to communicate

picture symbols

pen and paper

alphabet board

Mid-Tech AAC

Battery operated electronic devices

iTalk 2

GoTalk 9

Talking Brix 2

High-Tech AAC

- Electronic devices with more advanced processors
- Commonly referred to as Speech Generating Devices (SGDs)
- Tablet with a communication application
- Dedicated communication device

iPad with TouchChat

TobiiDynavox I-16

TalkPad Wego 8

How do we choose an AAC mode?

SETT framework: common method for determining Assistive Technology needs

SETT stands for:

Student

Environment

Tasks

Tools

Zabala, J. S. (1995)

Student

- What are the student's strengths?
- What are the student's unique needs?
- What instructional styles work best for the student?

Environments

- Where (and in what contexts) does the student need to communicate?

Tasks

- What does the student need to express?
- Which of those communicative tasks can the student already express?

Tools

- What communication system features are needed to meet the student's communication needs (as determined by the first three sections)?

Critical Elements of the SETT Framework
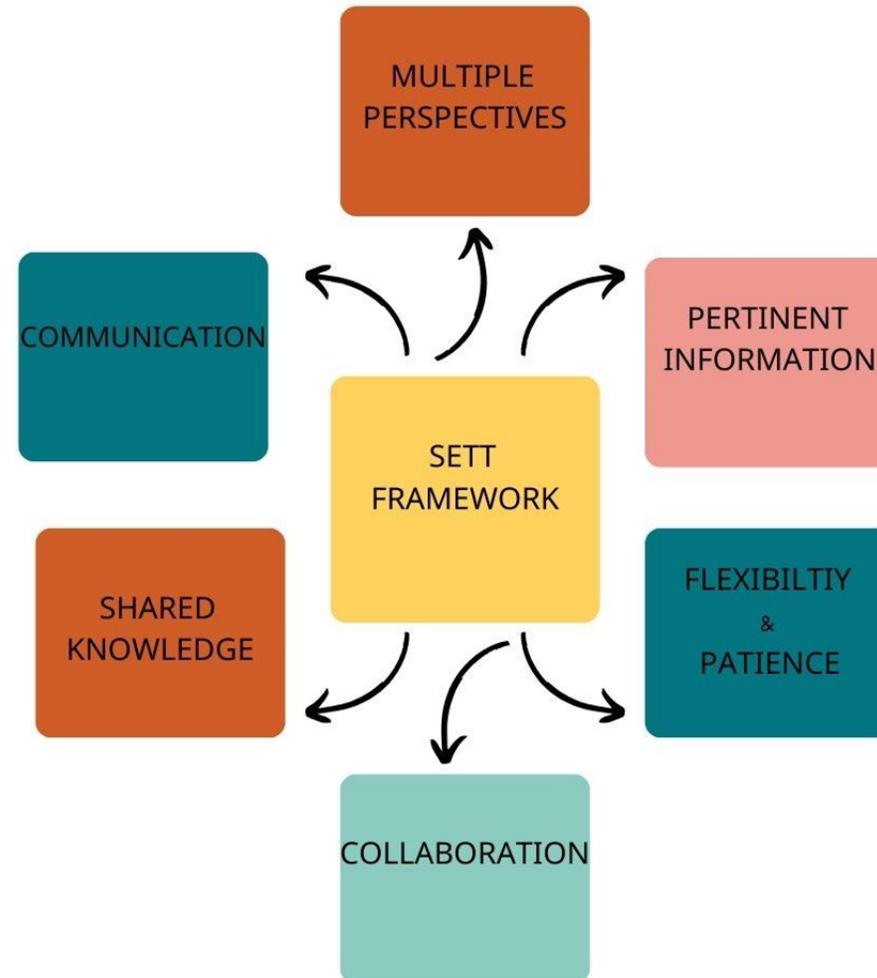
SETT Framework Worksheet

SPPS SETT Framework for Augmentative Communication

Student Name:_____ Date:_____ School: _____

Primary Disability: _____ Secondary Disability: _____ Grade: _____ Home Language: _____

S Student	E Environments	T Tasks	T Tools
What are student strengths & needs?	Where does the student spend time?	What communication does the student find difficult or impossible?	What communication tool features are needed? (see page 2)
Strengths ❑ expressive language ❑ receptive Language ❑ social skills ❑ technology skills ❑ interests: _____ ❑ _____ ❑ _____ **Needs** ❑ unable to express wants ❑ low intelligibility ❑ doesn't initiate ❑ echolalic speech ❑ single word sentences ❑ Can't talk about past or future ❑ word finding difficulty ❑ fatigue ❑ difficulty being understood by strangers	**School** ❑ cafeteria ❑ gym ❑ library ❑ bathroom ❑ bus ❑ classroom ❑ playground ❑ _____ ❑ _____ **Home** ❑ _____ ❑ _____ **Community** ❑ stores _____ ❑ restaurants _____ ❑ public transit _____ ❑ park _____ ❑ work place _____ ❑ relative's house _____ ❑ _____	❑ express wants & needs ❑ communicate about past/future events ❑ describe pictures ❑ answer questions ❑ provide information (i.e. names, places, things ❑ communicate in social interactions ❑ clarify speech ❑ participate in home, school, community, rec activities ❑ advocate for self interest ❑ _____ What is most important for your student/child to communicate about? _____ _____ _____ _____	❑ Vocabulary size ❑ Messages ❑ Display ❑ Symbol set ❑ Voice output ❑ Access method ❑ Portability Family/Personal Feature preferences? _____ _____ _____ _____

Would student benefit from an augmentative communication system? _____ Yes _____ No _____ Team needs more information

Rationale:

AAC System Features: *Check needed features*

❑ Vocabulary size
  ❑ <500
  ❑ >500
❑ Messages
  ❑ Preprogrammed (needs quick social phrases)
  ❑ Generative (needs to put words together)
  ❑ Text to speech (needs to spell)
    ❑ Word prediction
  ❑ Picture dictionary (needs to search by picture)
❑ Display
  ❑ Non-electronic
  ❑ Static
  ❑ Dynamic (non-electronic)
  ❑ Dynamic (electronic)
❑ Symbol set
  ❑ Real objects
  ❑ Tactile symbols
  ❑ Photos
  ❑ Line drawings (Colored/Black & White)
    ❑ Sign language
    ❑ High contrast
  ❑ Text
❑ Voice output
  ❑ Voice output is not needed
  ❑ Digitized speech
    ❑ Voice output in home language
  ❑ Synthesized speech
    ❑ Amplification

❑ Access method
  ❑ Direct selection
    ❑ Pointing with finger
      ❑ Key guard (fine motor needs)
  ❑ Pointing with head (Head mouse)
  ❑ Pointing with eyes (Eye gaze)
  ❑ Scanning
    ❑ One switch scanning
      ❑ Feedback (visual, auditory)
    ❑ Two switch scanning
      ❑ Feedback (visual, auditory)
❑ Portability
  ❑ Size
  ❑ Weight
  ❑ Carrying case
    ❑ Waterproof
  ❑ Carrying strap
  ❑ Mount system
    ❑ Wheelchair
    ❑ Floor mount
    ❑ Desk mount

*Other Specific Features needed: _____

16

TOOLS: Access Method

How will the learner most efficiently and accurately access the communication modality?

- Direct Selection
  - Pointing/pressing
  - Eye gaze
- Various types of switches
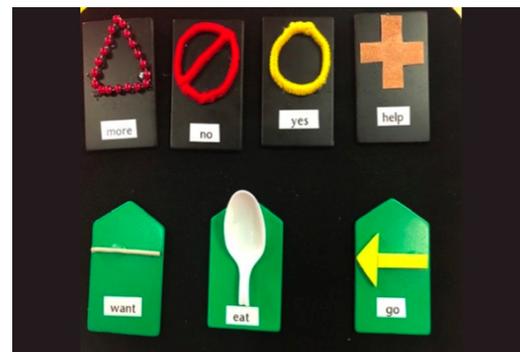
Tools: Eye Gaze

Direct selection with sustained eye gaze

- Low-Tech: user sustains gaze on a symbol, communication partner will follow their gaze to interpret the desired message

- High-Tech: user sustains eye gaze to make selections on a speech generating device

Tools: Switches

- Used with various AAC modes
  - Low tech: auditory partner assisted scanning using picture symbols
  - Mid tech: recordable voice output devices
  - High tech: switch scanning with speech generating devices
- Placement
  - Head
  - Upper extremity
  - Lower extremity
  - Identifying a reliable and repeatable motor movement

Tools: Switches

Ablenet Little Candy Corn Proximity Sensor Switch

Enabling Devices Joystick Switch

Enabling Devices Petite Pillow Switch

Ablenet Jelly Bean

MLL Considerations

- Translate symbols for home for low- or mid-tech AAC
- Provide trainings for families
- High tech device options
- Record messages in the home language
- User area with the home language

How do we often see our students use their AAC systems?

- To request
- To get what they want
- To get what they need

How do we move beyond to increase academic engagement?

- To share opinions
- To make connections
- To comment
- To answer questions

Challenges in Literacy Development for AAC Users

Learners who rely on AAC are regularly read to by their parents and teachers

HOWEVER when reading to individuals who rely on AAC, the adults dominate the interaction & provide few opportunities for the learners to participate

AND when asked to participate -- focused on the mechanics of the book (*turn pages or point to pictures*) rather than discuss the story to promote comprehension and develop language skills

# Intervention to Promote the Development of Emergent Literacy Skills

AAC helps build literacy skills

- language, sequencing, and exposure to print on AAC systems is help for people who can or are learning to read

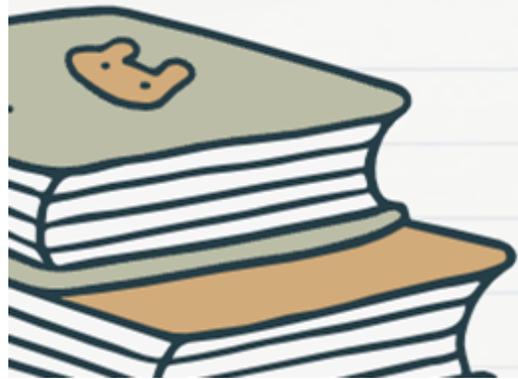|		
Provide Access to Appropriate AAC for Emergent Literacy Activities	Teach Interaction Strategies to Literate Partners	Provide Independent Access to Reading Materials
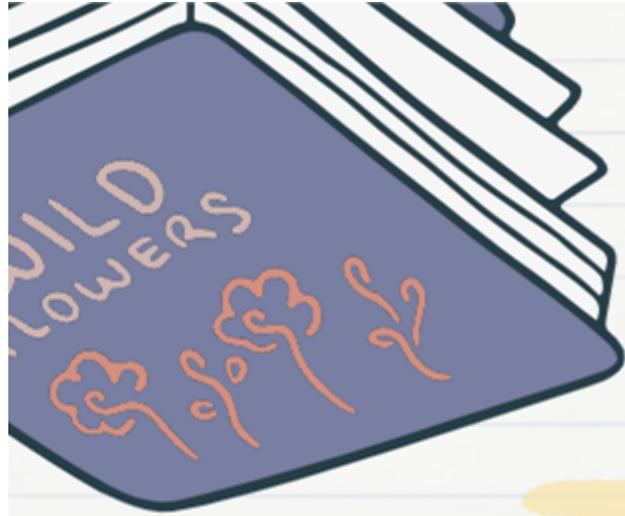
AAC & Literacy

Literacy Strategies

- Have the student select the book... why?

  - Increases autonomy

  - This does not happen as much for children with disabilities as with typically developing children

  - If the student is unable to point/gesture to their preferred book, **how might this look using different communication modes**?

Low-Tech: selecting "yes" or "no" picture symbols as book options are presented	Mid-Tech: partner assisted scanning to select "yes" or "no" as book options are presented	High-Tech: direct selection of "yes" or "no" as book options are presented

Put the CROWD in the CAR!
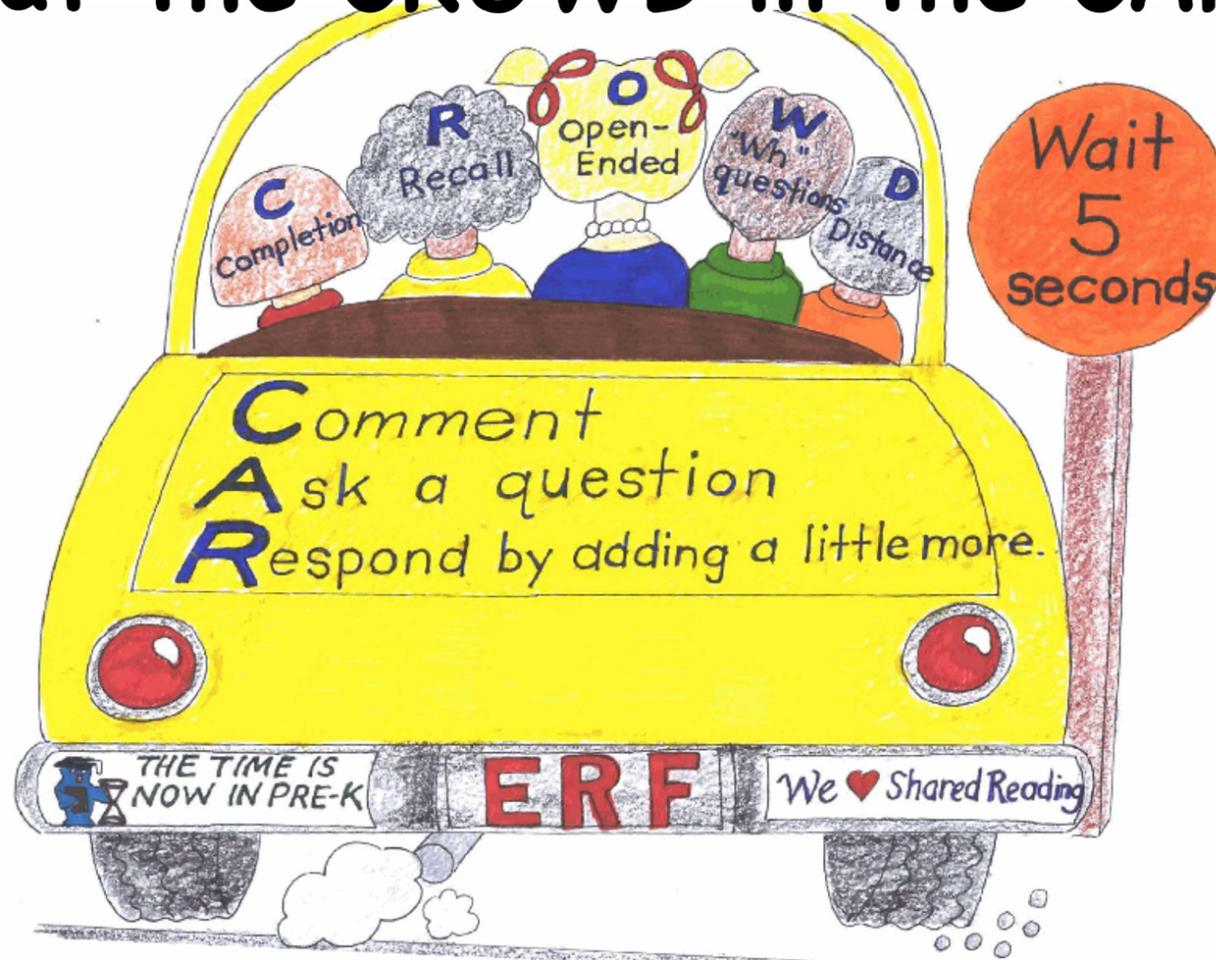
Put the CROWD in the CAR

Comment

Ask

Respond

Completion

Recall

Open Ended
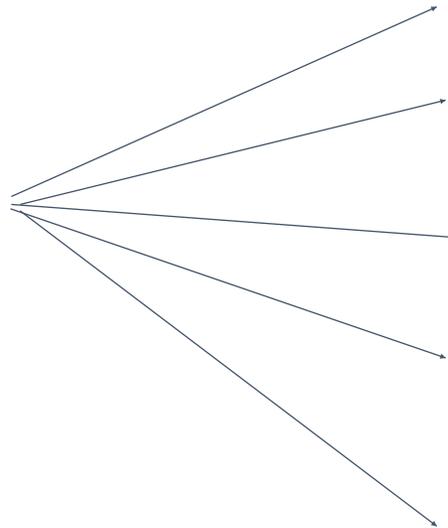
Wh- Question

Distance

Answering Errorless Questions

Creating opportunities for shaping responses with emerging communicators and presuming competence
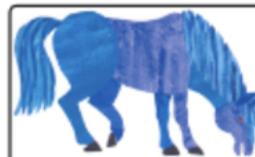
Preference Questions: allowing the opportunity to share likes and dislikes

Errorless Comprehension Questions: providing a field of choices to WH questions that are all accurate

Who was your favorite character?

nemo   dory   bruce

What animal was in the book?

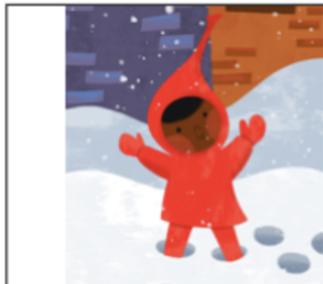blue horse | brown bear

Answering Comprehension Questions

Creating opportunities for answering WH questions

Include literacy vocabulary: characters, settings, etc.

Provide opportunities to expand response, or provide additional information to relate to the story

Who was the main character in the story?

Peter
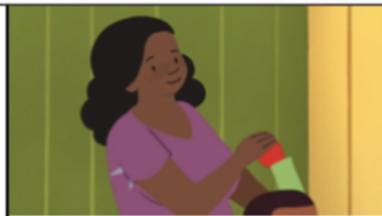
Mom

Where did Peter play?
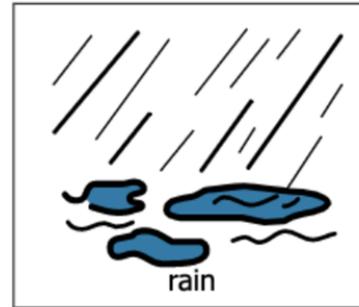
rain

wind
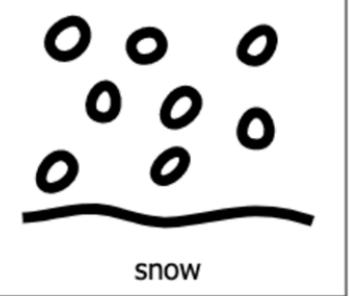
snow

Core vs. Fringe Vocabulary

Core Words

Words we use most frequently throughout the day

Can be any part of speech

Examples: "go", "I", "feel"

Fringe Words

Words we use less frequently throughout the day

Can be any part of speech

Typically context specific

Examples: "boat", "Minnesota", "purple"

Core vs. Fringe Vocabulary: Low and Mid-Tech

Core Words

Core + Fringe Words

Activity Specific

Core vs. Fringe Vocabulary: High-Tech

Home Page - more core words

Topic Page - more fringe words

Wait Expectantly

- Provide time for the learner to respond to a question, comment, or book passage

- Some learners may need up to 30 seconds to process information and generate a response

- Use facial expressions or gestures to indicate that communication is welcome
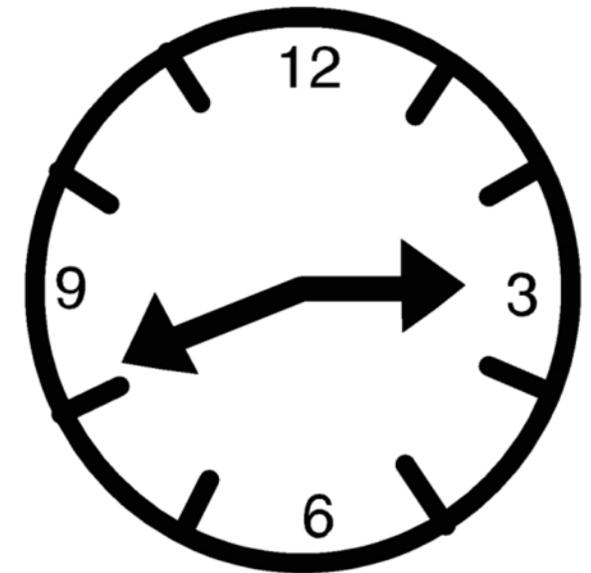
Aided Language Input

- Use slow rate of speech while modeling with the communication system

- Pause and give expectant look after modeling

- Model with self talk (what you are doing) and parallel talk (what student is doing)

- Model a variety of communicative functions

- Model one more word than the child's average length of sentence

- Use 80: 20 ratio of statements to questions/commands

Inviting AAC Modes into Literacy

Go! Go! Go!

Core First® Learning

Examples of low-tech participation

- Looking in the direction of a core word picture symbol as it is simultaneously read

- Answering comprehension questions using picture symbols

- Commenting on the story to share an opinion

What did you think of the story?

not   like

What can go?

car   train   boat

Examples of mid-tech participation

Activating a voice output device that has recorded repeated lines or a repeated core word to participate in the shared reading

Commenting about the book using partner assisted scanning

- "Did you like the book?" Like/Not

- "Do you want to read the page again?" Yes/No

Activating a bluetooth switch to "turn the pages" or with a compatible digital book (see Literacy Resources)

Examples of high-tech participation

- Make a prediction about what the book topic

- Label vocabulary

- Describe the pictures

Planes go fast.
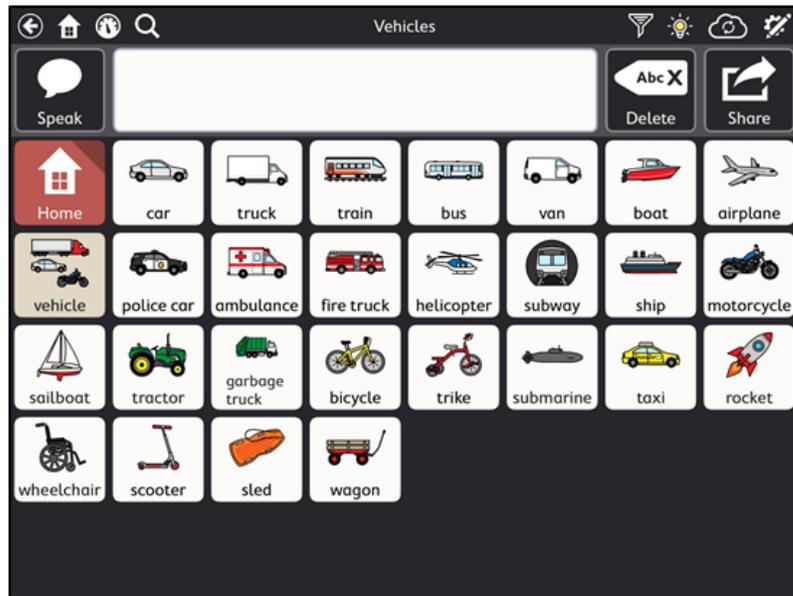
Examples of high-tech participation: Visual Scene Displays (VSDs)
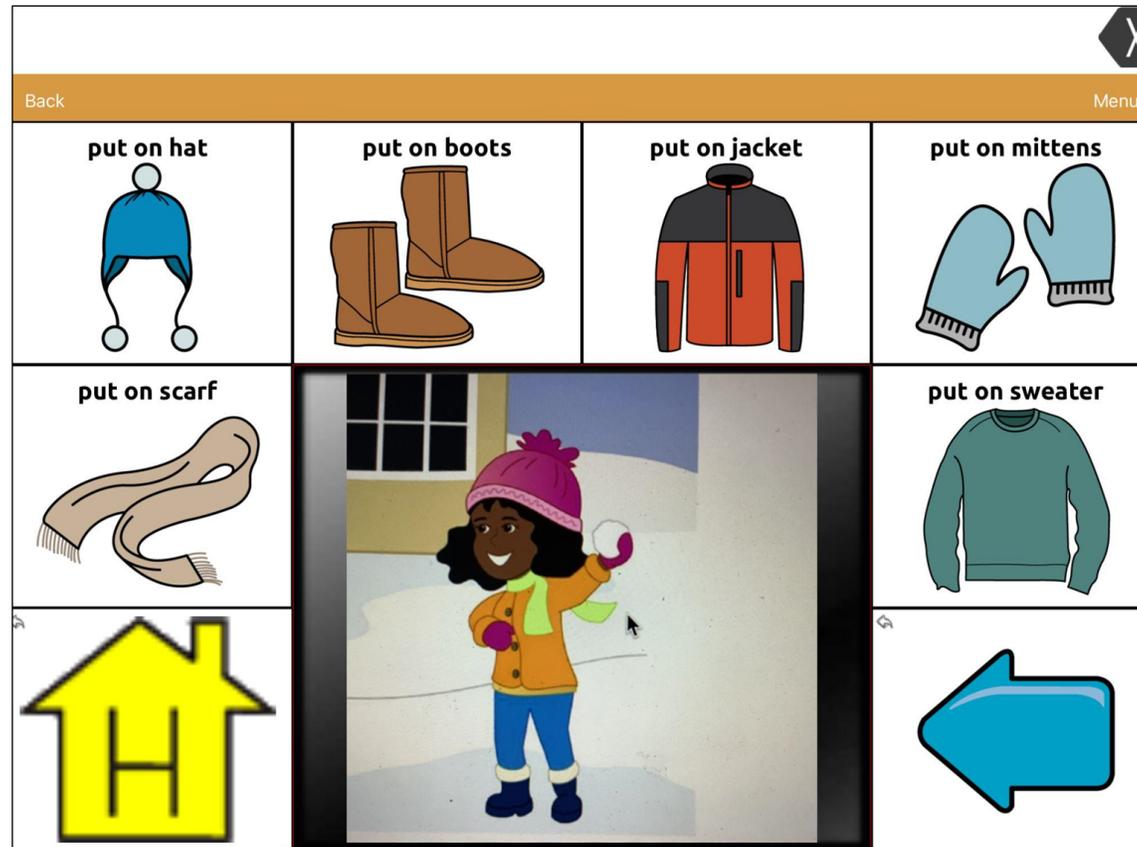
From reading to writing

- Create opportunities to work on emergent writing skills

- Those with CCN require many opportunities to participate in emergent writing experiences that are scaffolded by their communication partner
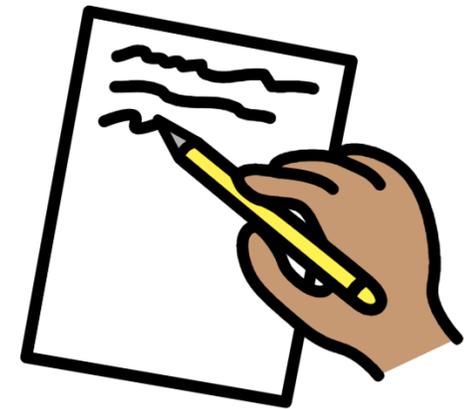
Self-Advocacy

I like to communicate with …
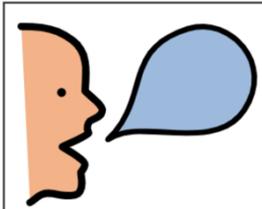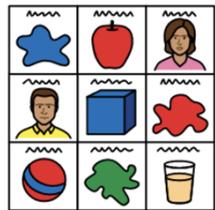
verbal speech | picture symbols | AAC device | switch

IPad with speech application | sign language | keyboard | gesture
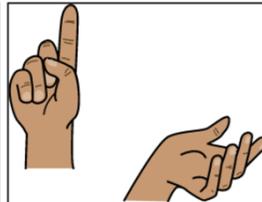
How do you like to use your device at school?
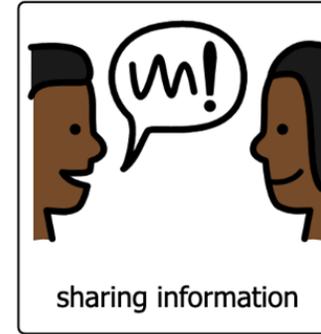
sharing information | asking questions
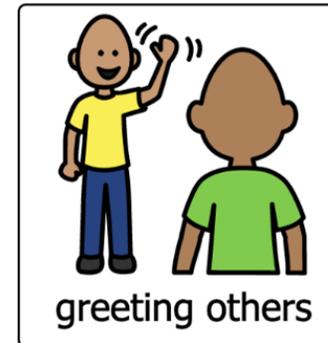
greeting others | sharing feelings

Writing

- Low tech access using picture symbols or partner assisted scanning
- Mid tech access to make choices for letters
- High tech access exploration of the keyboard
- Writing name
  - With leveled prompting -- fading from most to least support
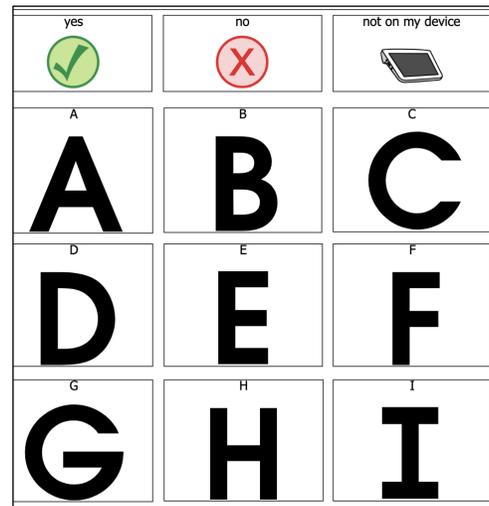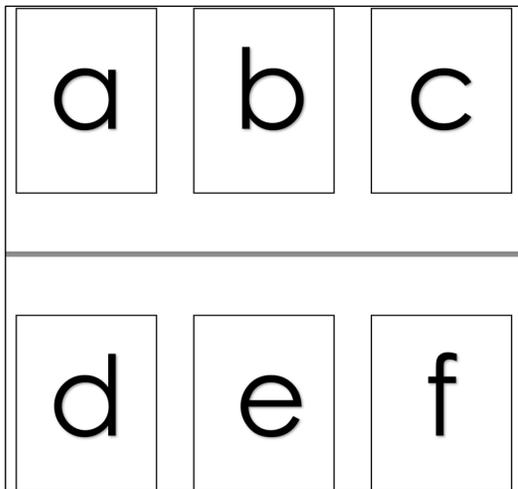
Becoming authors

Create a poem

- Choices to fill in the blank

berries	birds	bugs	fire trucks
airplanes	butterflies	lakes	flowers
candy	ice cream	fruit	cookies
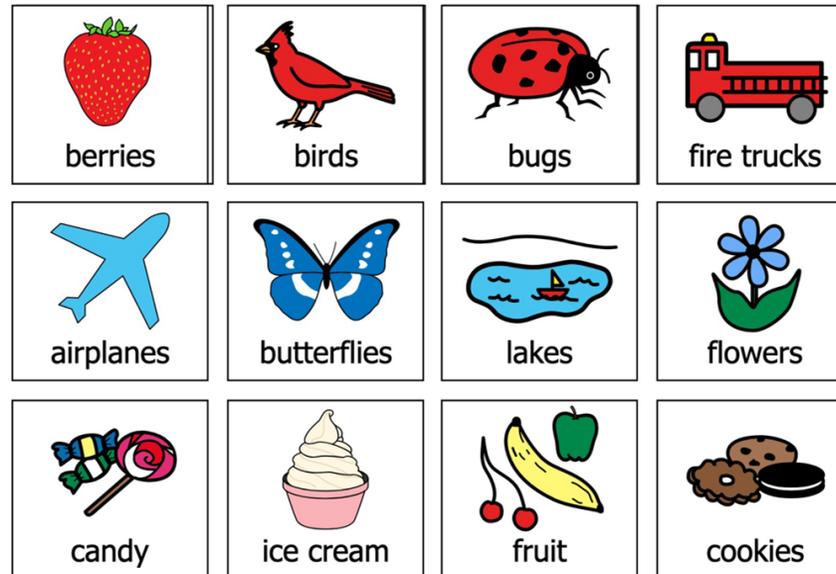
To:_____

_____ are red.

_____ are blue.

_____ is sweet,

and so are you!

Love:_____

Ms Makinson TpT 2014

Becoming authors, continued.

- Include preferred activities
- Include a core word
- Add repeating lines

Like & Don't Like

A Poem by Izaiah

I like football.

I don't like
cold weather.

I like xbox 360.

Literacy Resources: Digital Books

Tobii Dynavox Core Word books

https://www.tobiidynavox.com/products/core-first-lessons

Monarch Reader

https://monarchreader.com/
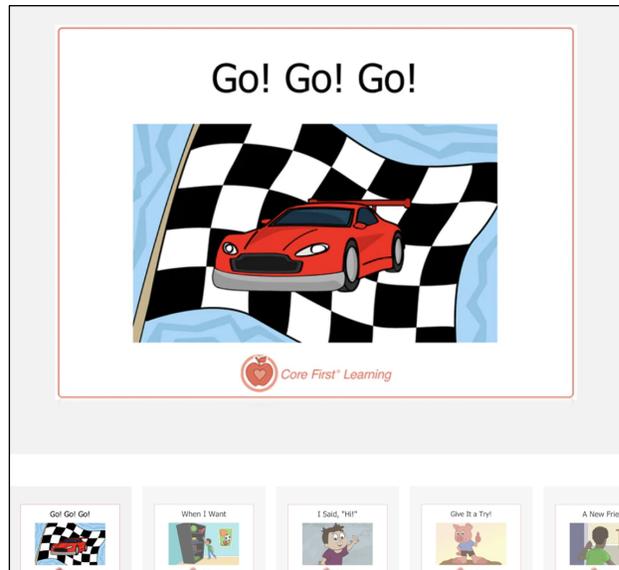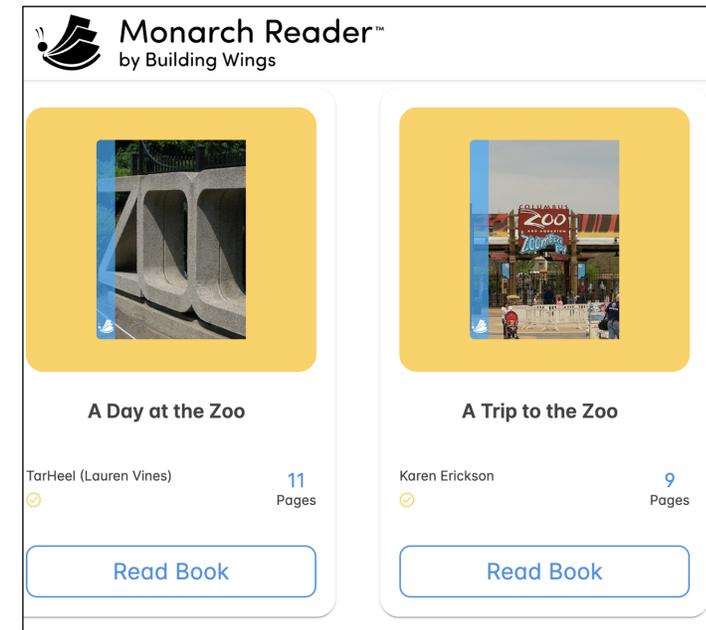
Literacy Resources: Digital Books, continued.

Unite for Literacy	Reading A to Z
https://www.uniteforliteracy.com/	https://www.readinga-z.com/
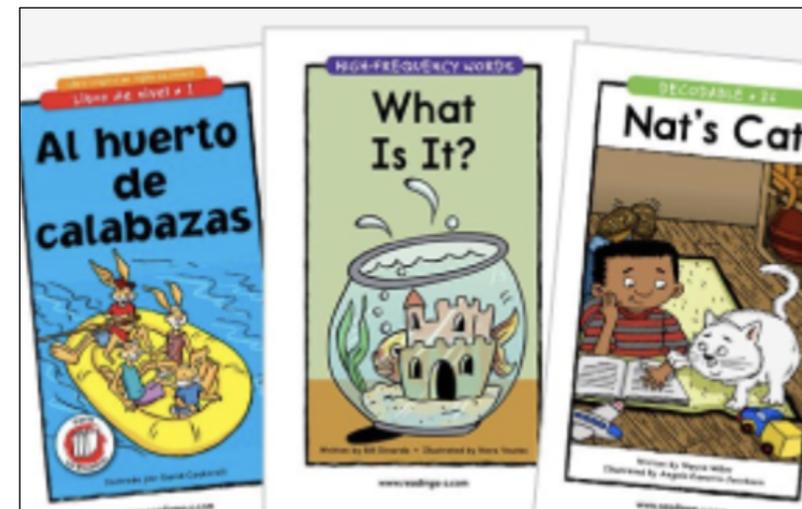
Literacy Resources: Additional Resources

- AssistiveWare Core Word Classroom

  https://coreword.assistiveware.com/

- PRC-Saltillo Literacy Planners

  https://www.prentrom.com/caregivers/implementation-activities

- PRC-Saltillo Language Lab: Let's Teach Core

  https://aaclanguagelab.com/resources/lets-teach-core

Literacy Resources: Additional Resources, continued.

- AssistiveWare Core Word Classroom

  https://coreword.assistiveware.com/

- PRC-Saltillo Literacy Planners

  https://www.prentrom.com/caregivers/implementation-activities

- PRC-Saltillo Language Lab: Let's Teach Core

  https://aaclanguagelab.com/resources/lets-teach-core

References

- American Speech-Language-Hearing Association (n.d.). Augmentative and Alternative Communication (Practice Portal). Retrieved December, 22, 2024, from www.asha.org/Practice-Portal/Professional-Issues/Augmentative-and-Alternative-Communication/.

- Elsahar, Y., Hu, S., Bouazza-Marouf, K., Kerr, D., & Mansor, A. (2019). Augmentative and alternative communication (AAC) advances: A review of configurations for individuals with a speech disability. Sensors, 19(8), 1911. https://doi.org/10.3390/s19081911

- Erickson, Ph.D., K., Greer, Ph.D., C., Hatch, Ph.D., P., & Quick, Ph.D., N. (2022). Putting the CROWD in the CAR Facilitator Manual (p. 11) [Review of Putting the CROWD in the CAR Facilitator Manual]. Center for Literacy and Disability Studies, Department of Health Sciences, UNC-Chapel Hill.

References, continued

- Government of South Australia Department of Education. About Complex Communication Needs (CCN). Retrieved February 10, 2025, from https://www.education.sa.gov.au/docs/support-and-inclusion/practice-guidance/complex-communication-practice-guidance.pdf

- Hartmann, A. (n.d.). Integrating literacy with AAC instruction [Review of Integrating literacy with AAC instruction]. AssistiveWare. Retrieved February 10, 2025, from https://www.assistiveware.com/learn-aac/integrating-comprehensive-literacy-instruction#:~:text=Model%20key%20words%20using%20AAC,topics%20that%20are%20high%20interest

- Shared Reading. Literacy Instruction for Students with Significant Disabilities. Retrieved February 10, 2025, from https://literacyforallinstruction.ca/shared-reading/

References, continued 2

- Zabala, J. S. (1995). The SETT Framework: Critical areas to consider when making informed assistive technology decisions [Online] Retrieved from http://bit.ly/academiaSETT2005

- Zangari, C. (2017, April 10). PrAACtical Resources: 10 Things You May Not Know About AAC [Review of PrAACtical Resources: 10 Things You May Not Know About AAC]. PrAACtical AAC. https://praacticalaac.org/praactical/praactical-resources-10-things-you-may-not-know-about-aac/

Questions?

Contact Information:

Jen Erickson: jen.erickson@spps.org

Chloe Converse: chloe.converse@spps.org

Charting *the* Cs

Thank you!