



Charting the Cs  
Conference 2025:

*To Literacy and  
Beyond*

Cooperation  
Communication  
Collaboration

# **Eye gaze as alternative access method: from overcoming challenges with positioning to creating communication opportunities and making adaptations to general education curriculum.**

Presentation Date: April 29, 2025

Presenters Names:

*Julie Andersen, Physical and Health Disabilities Teacher, and AT  
Specialist*

*Olga Campbell, SLP and AAC specialist*

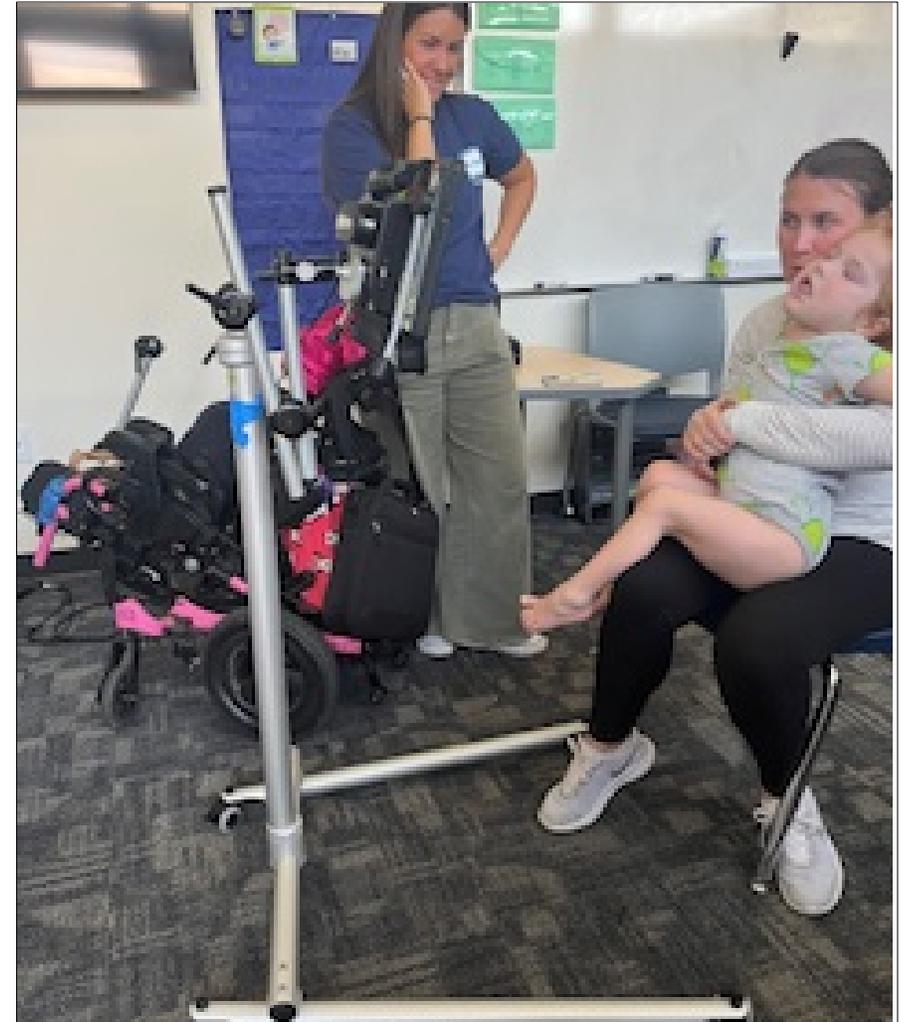
*Wayzata School District*

# Overview of the session:

- Share case studies of 4 eye gaze students and discuss unique challenges for each one.
- Strategies for working with our wheelchair bound medically complex students.
- Make and Take low tech eye gaze board.
- Questions and comments.

# STUDENT #1: KINDERGARTEN

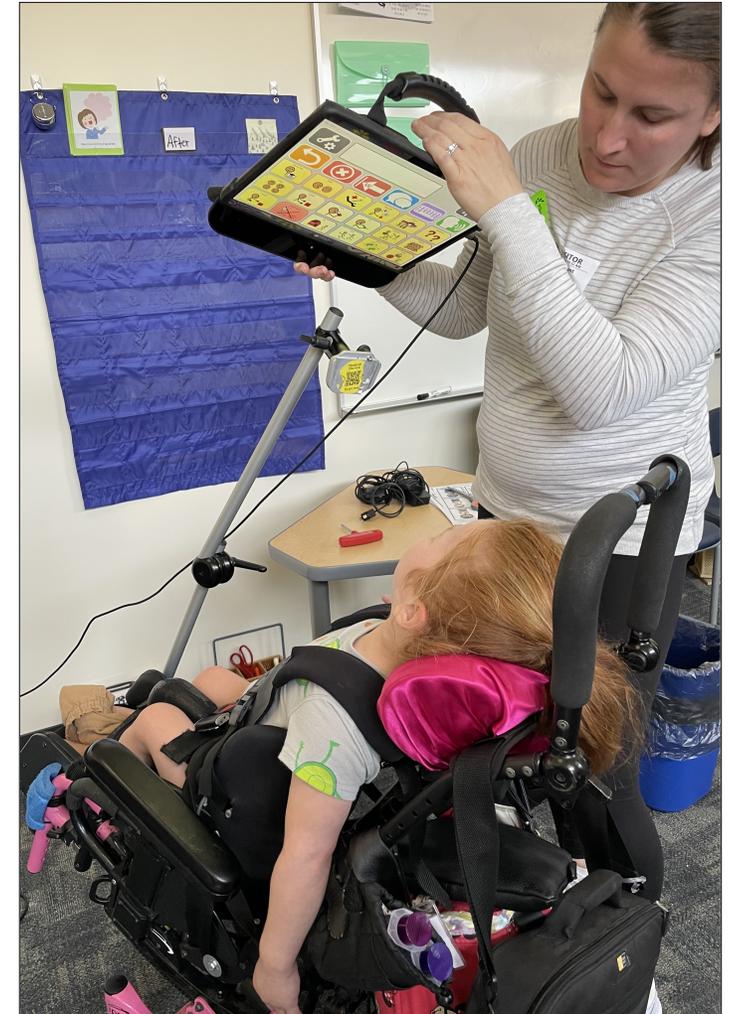
1. Diagnosis of viral encephalitis.
2. Severe Impact on mobility, speech, and accessing education.
3. Uses TTMT (Talk to Me Technologies) Eye Gaze Device and Grid Software.
4. Positioning for accessing her eye gaze device has been the biggest challenge.



# WHEELCHAIR POSITIONING

**Challenge: September- Student not able to access her device when she is in the wheelchair because it needs to be positioned higher (student tends to arch her back).**

Consider contributing factors: medical trauma, adjusting to the new school/longer day, ongoing medical issues.

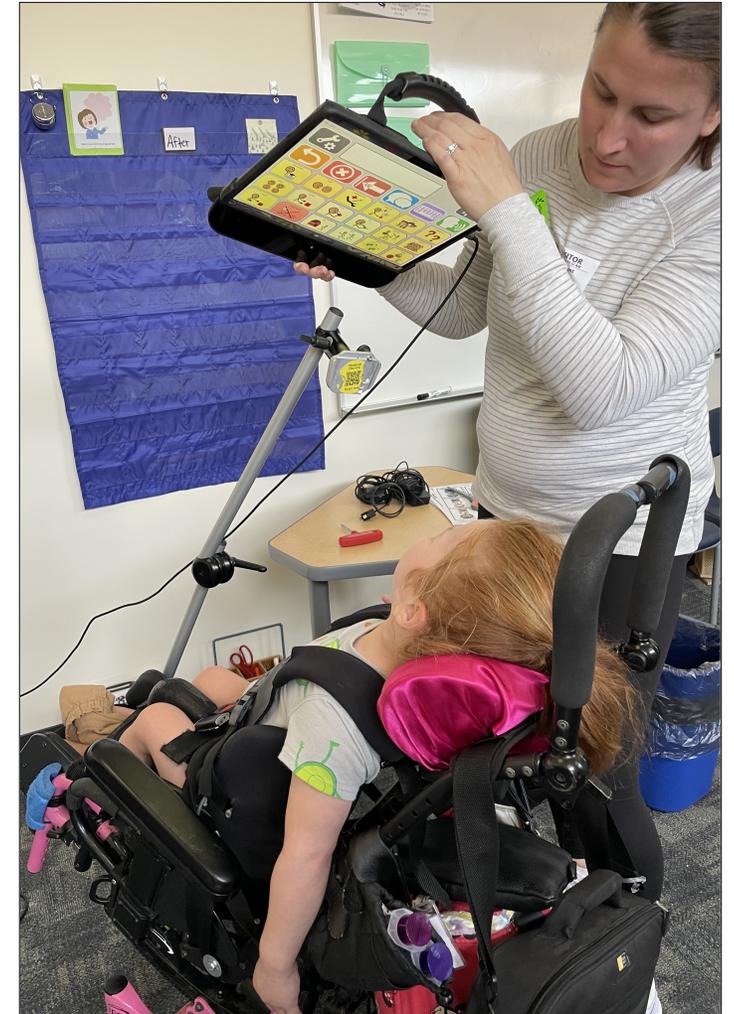


## Steps taken:

- working with the vendor (TTMT) and their positioning team to acquire a longer arm for the WC attachment
- Giving the student and the team time build trust and adjust

## End result (January):

Student is more comfortable and relaxed, she has more stamina for school. Device is now positioned higher and at an angle= better access.



# FLOOR POSITIONING

- **Best positioning while she is on the floor – at home/preschool.**
- **Challenges with floor positioning:**
  - Finding dedicated space in the classrooms
  - Medically fragile- students tripping
  - Not able to see what the teacher or peers are doing
  - Need a floor stand to hold the device (1,345\$)



# FLOOR POSITIONING, continued

- **Steps taken:**
  - Tried using tomato chair: it is moveable and she can access the eye gaze and see her peers
  - Getting a floor stand loan from TTMT until we figure out funding for the floor stand
  - Applying for SubAwards from AT Coop

**End result (January): Getting the award (1,200\$) and purchasing our own floor stand**



# NEXT STEPS

- Continue getting used to the tomato chair
- On going problem solving for eye gaze issues: camera not waking up right away after the device has been in the sleep mode. Consider remote sessions with the vendor (several sessions with the vendor)



## STUDENT #2: 2ND GRADE

1. Diagnosis of Cerebral Palsy (spastic quadriplegic)
2. Impacts mobility, speech, and overall educational access.
3. Currently uses a PRC Accent Eye Gaze with Unity Vocabulary.
4. Challenges in the area of assessment in math and reading. Student refusal and staff turnover.
5. Current needs; math and reading instruction



Teacher and student in front of an EyeGaze device video



# Kindergarten-1st Grade

1. Social; wants to be with her peers at all times.
2. Giving the time to get used to school, changing support staff.
3. Our role was to continue to advocate for the student; time, staffing, opportunity and space.
4. Respecting her refusal.
5. We trialed the lessons provided through PRC [Eye Gaze Reading Curriculum](#)

Kindergarten –  
1<sup>st</sup> Grade video



## 2ND GRADE- PROGRESS

1. She has made great gains in using her eye gaze at school.
2. She now wants her eyegaze device on her wheelchair at all times. No longer refusing!
3. She prefers to use the word finder on her eye gaze keyboard.
4. Using low-tech eye gaze board for reading (word identification).



Video example

# WRITING IN 2ND GRADE

- General education teacher started using eye gaze with her to produce writing.
- Teacher asks her questions and student answers with her eyegaze.
- Whatever the student says using her eyegaze the teacher or paraprofessional writes down.
- This does 2 things; provides a time for her to explore her eyegaze device and increase her writing skills.

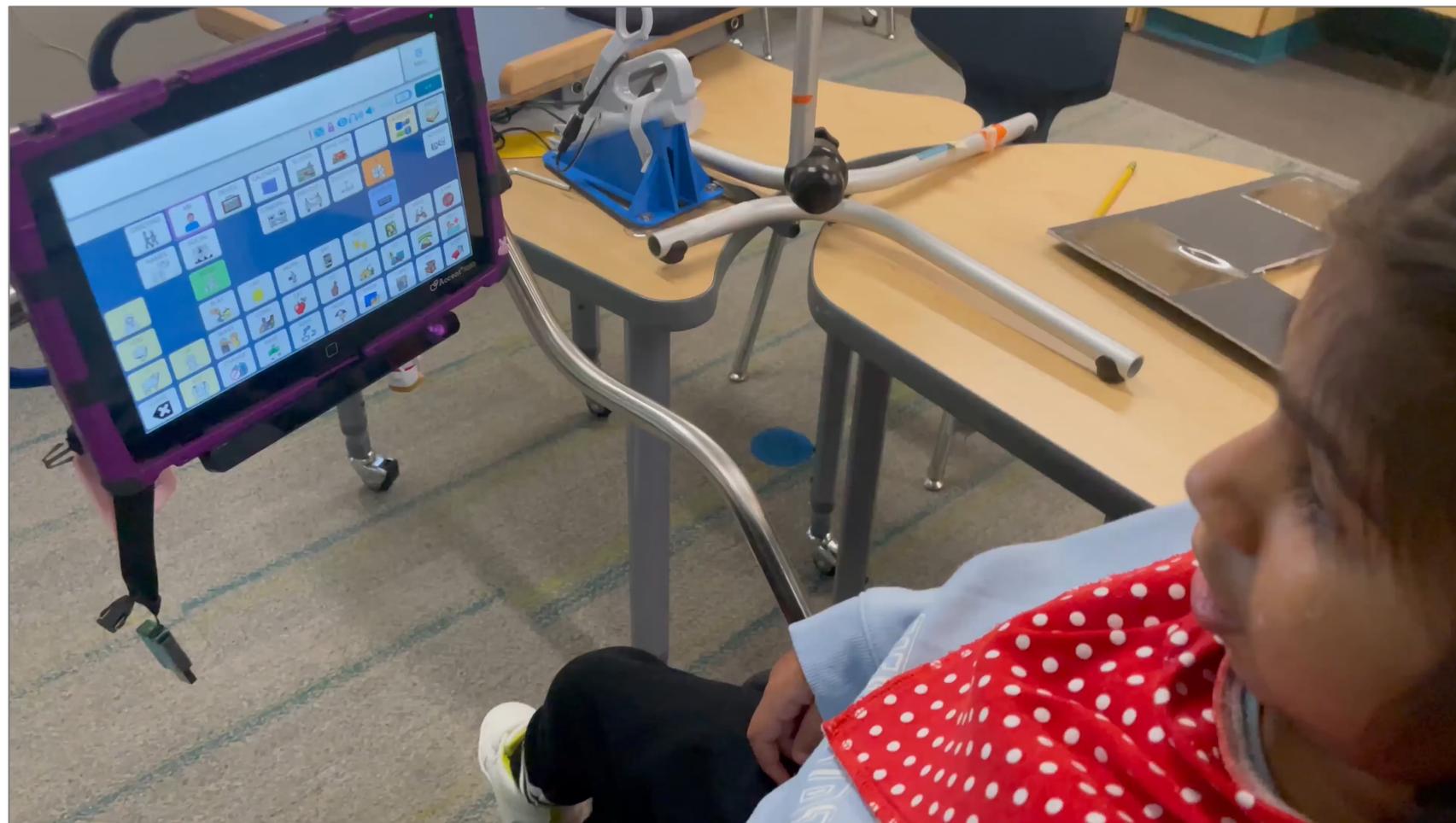


# NEXT STEPS

1. Communication with peers. She is extremely social. How can we create meaningful and organic opportunities for her to strengthen her friendships with classmates?
2. Writing options: to type with the keyboard or using Core on her eyegaze.
3. Reading on the device/apps



Next Steps  
video



## STUDENT 3: 2ND GRADE

- Diagnosis of arthrogryposis:
- Impacts mobility and ability to access his educational environment.
- Started with a PRC eye gaze Accent device for communication (about 2 y.o.), but has developed speech (intelligibility is impaired).
- Current eye gaze device use: Epic books and a limited number of sites that are compatible with eye gaze.





# In search of an optimal AAC system: where to start?

## Continued

### Explore voice/Text to speech access:

- Built in text to speech options on IOS
- Atypical speech on IOS 18
- [voicelTT](#) website. Watch [The Stuff of Champions: VoicelTT Integrations and Impact video](#).

### Explore Eye gaze access:

- [IOS 18 eye tracking feature for app control](#)
- [TD Pilot](#)
- [PCeye](#)
- [USB add on for Accent devices](#)

# Exploring voice/text to speech access:

<b>Microphone and regular voice control on Ipad</b>	<p>-We trialed a <a href="#">Tomosiok</a> microphone- great microphone but did not pick up his voice.</p> <p>-Built in accessibility feature <a href="#">voice control</a> control on iPad, due to atypical speech was unable to access.</p> <p><b>RULED OUT FOR NOW</b></p>
<b>Atypical speech on ios 18</b>	<p>-turned on atypical speech on Siri - not sure how that communicates with notability or notes; did not have consistently good results so far- <b>RULED OUT FOR NOW</b></p>
<b><a href="#">Voice ITT</a></b>	<p>-compatible with chrome books only, need signed permission from parents 1 month free trial; \$49 a month subscription – <b>RULED OUT FOR NOW</b></p>

Exploring  
voice/text to  
speech access  
video



## Exploring eye-gaze access:

<a href="#">IOS 18 eye tracker for typing and apps</a>	<ul style="list-style-type: none"><li>• Tried eye-tracking feature on gen 10 ipad</li><li>• Required calibration every time your turn on eye tracking</li><li>• Eye gaze tracking was not efficient for typing</li><li>• Tried Epic instead and it was hard to navigate</li><li>• <b>RULED OUT FOR NOW</b></li></ul>
<a href="#">TD Pilot</a> or <a href="#">PCeye</a>	<ul style="list-style-type: none"><li>• A lot of potential, when tried with another student</li><li>• His current device is less than 5 years old, MA would not cover</li><li>• <b>RULED OUT FOR NOW</b></li></ul>

## Exploring eye-gaze access, continued:

### USB add on for Accent devices

- USB input stick could be used to control an external computer using the PRC Accent device.
- We would need to switch from Empower to NuVoice toolbox to have access to more environmental controls.
- Scheduled appt with the PRC vendor: Everett was able to type in a document and email and search the web.
- Notebooks feature in Accent- taking notes on the device as well
- **GO WITH THIS OPTION**

# Exploring USB input stick for computer controls

First video

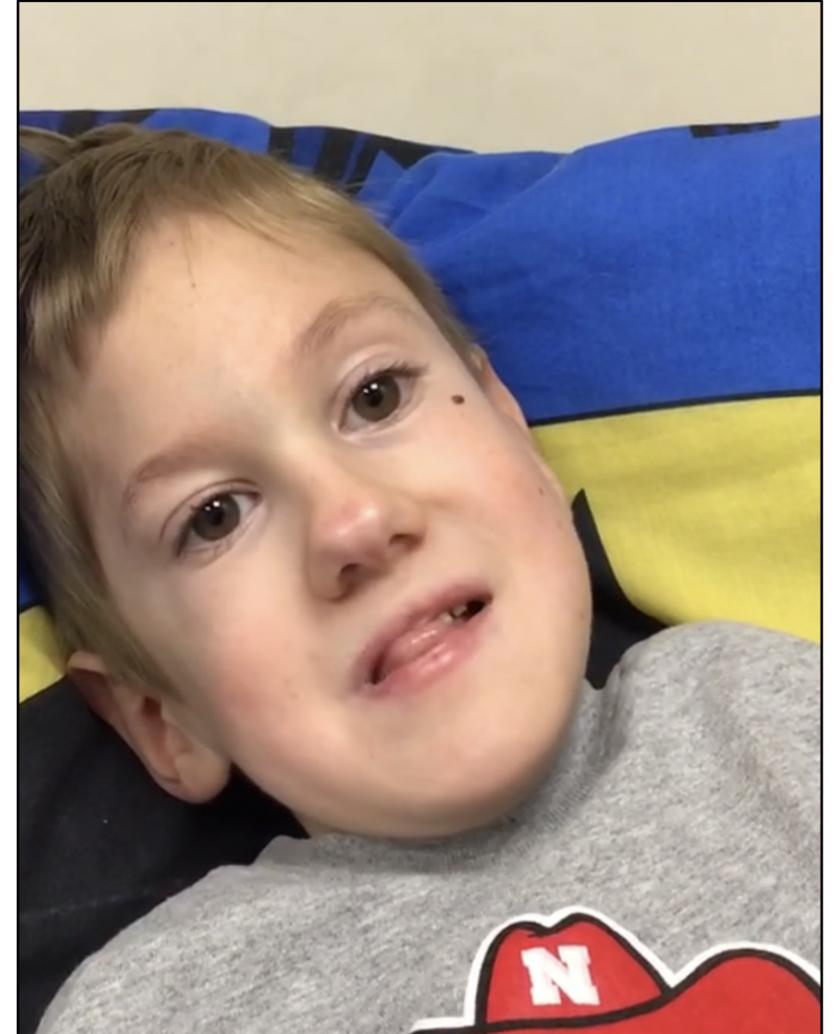


## Second video



## NEXT STEPS, continued

- Ordered USB input stick
- Updated his device and switched over to NuVoice
- Parents scheduled appt with PACER center to explore gaming controls
- Work with the Tech office to trial computer and chrome book with Everett
- Train staff how to use it for academics



## Student # 4: High School

1. Diagnosis of quadriplegic cerebral palsy
2. Never tried eye gaze, used scanning method but reportedly was successfully.
3. Current need- eye gaze trial.
4. Initial appt with Tobii- able to activate music videos
5. Parent has not returned required paperwork to begin trial as of January.



# CHALLENGES FOR EACH STUDENT

- Staff thinking eye gaze is a quick fix-and students should be proficient immediately.
- Staff turnover. Teacher, Paraprofessional, and Speech.
- Technology difficulties; charged equipment, forgotten equipment, broken etc
- Student refusal, staff and parent buy in.
- Time and Patience!

**"SUCCESS IS TO BE  
MEASURED NOT SO MUCH  
BY THE POSITION THAT ONE  
HAS REACHED IN LIFE AS BY  
THE OBSTACLES WHICH HE  
HAS OVERCOME."**

*Booker T. Washington*

# What is Medical Trauma?

**Psychological distress from frequent/stressful medical procedures, leading to anxiety, PTSD-like symptoms, and avoidance behaviors.**

Key Aspects:

- **Frequent Interventions:** Stress from repeated procedures and therapies.
- **Lack of Agency:** Feelings of helplessness during medical care.
- **Sensory Overload:** Distress from hospital sights, sounds, and smells.
- **Fear of the Unknown:** Anxiety from uncertainty about diagnoses or outcomes.
- **Social Isolation:** Disruption of routines and social interactions.



## How Medical Trauma Manifests:

- Behavioral changes (aggression, withdrawal, difficulty concentrating).
- Physical symptoms (headaches, sleep issues, appetite changes).
- Avoidance behaviors, reluctance to trust support providers.

## Support Strategies:

- **Trauma-Informed Practices:** Use clear, empathetic communication; provide choices to foster autonomy.
- Collaboration with healthcare providers.
- IEPs with emotional support strategies.
- Access to mental health support (therapy, counseling).



# Requesting Student Permission

- Always ask students with complex physical needs for permission before moving, touching, or assisting them.`
- Foster a sense of autonomy and respect for their dignity.
- Reduce feelings of helplessness or discomfort by involving them in decisions.
- Use clear, age-appropriate communication to ensure understanding.
- Offer choices to empower students and build trust.
- Support their emotional comfort and well-being during interactions.



**STOP**

Please Do Not Touch  
Without Permission

Thank you.

# MAKE AND TAKE: let's make a low tech eye gaze board



559 3

**aacforall** Low-tech eye gaze boards for in the moment communication created out of Dollar Tree Foam board.



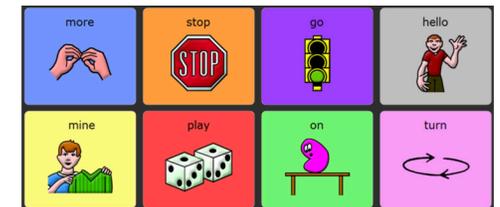
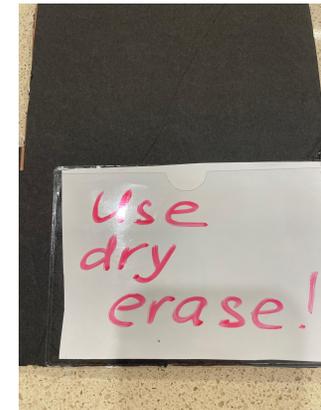
# MAKE AND TAKE LOW TECH EYE GAZE BOARD



Apply polly pockets to the corners of the foam board.



Cut the opening with a box cutter (use duct tape to seal the edges if you want)



Get low tech symbols



**Thank you!**

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