

Low-tech Augmentative and Alternative Communication for adults

Compass Assistive Technology Service

Helen Paterson and Samia Malik (SLTs)



Royal Hospital for Neuro-disability
A national medical charity

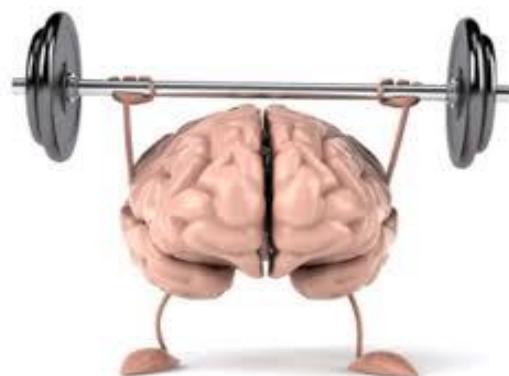
Who Are We?

- Compass is the specialised AAC service for adults in West London
- We work in the community and with inpatients at RHN
- Visit our website for information on our referral criteria and to make a referral



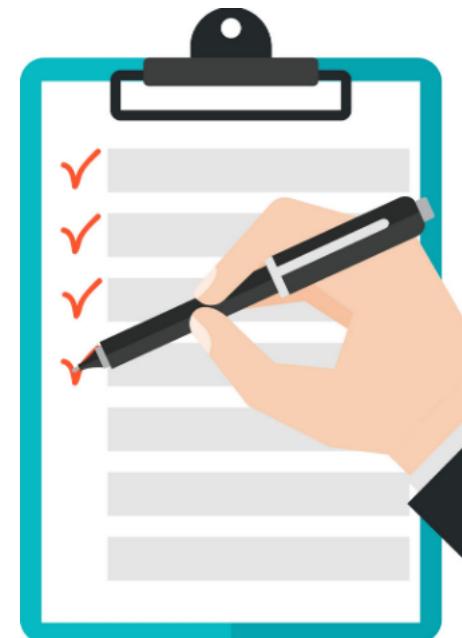
Key learning points

- To gain an awareness of the range of low tech AAC systems and strategies available
- To consider the factors involved in creating a low-tech AAC system
- To be able to create a low-tech AAC system independently



Agenda

- 1)Introduction to low-tech AAC
- 2)Systems for pointing
- 3)Systems for alternative access
- 4)Using symbol vocabulary
- 5)Tips and tricks



What is AAC?

AAC= Augmentative and Alternative Communication, is made up of:

Augmentative= supports/adds to speech

Alternative= instead of speech

Communication= in AAC this means using words or symbols to get the message across.



Types of AAC

Unaided: no equipment required e.g. facial expression, body language, gesture, signing

Aided: some equipment/tool is used

Low tech: paper based, not electronic (e.g. books and charts)

Mid tech: electronic, batteries required, voice output (e.g. Big Mack, Go Talk)

High-tech: most complex, mains charging required, voice output (e.g. Grid Pad)

Why are low-tech aids important?

When high tech AAC is not accessible:

- in the bath
- acute hospital admission
- respite stay
- travelling on transport
- It can be quicker and more easily accessible than a person's high tech system
- Some people prefer using low-tech



Considerations for low-tech AAC

- Functional use
- Access
- Language skills – text, symbols or both?



Functional use

- Why do they want to use it?
- Who will they use it with?
- Where will they use it?



Get someone's attention



Answer questions



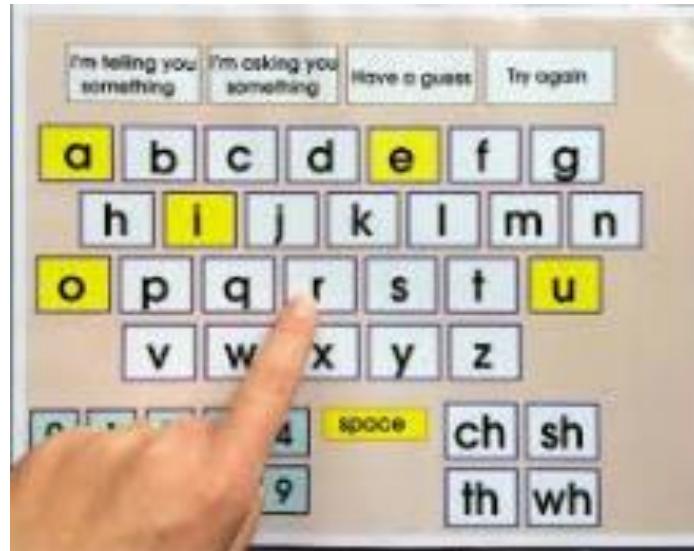
Express emotional and physical states



Direct other's actions

Access

- Can they point to a chart with their fingers?
- Can they use another part of their body/gesture?
- How do they indicate ‘yes’?
- Do they have any hearing or visual difficulties?



Language skills

- Can they spell?
- Can they identify whole words?
- Do they need symbols?
- How many symbols can they manage on a page?

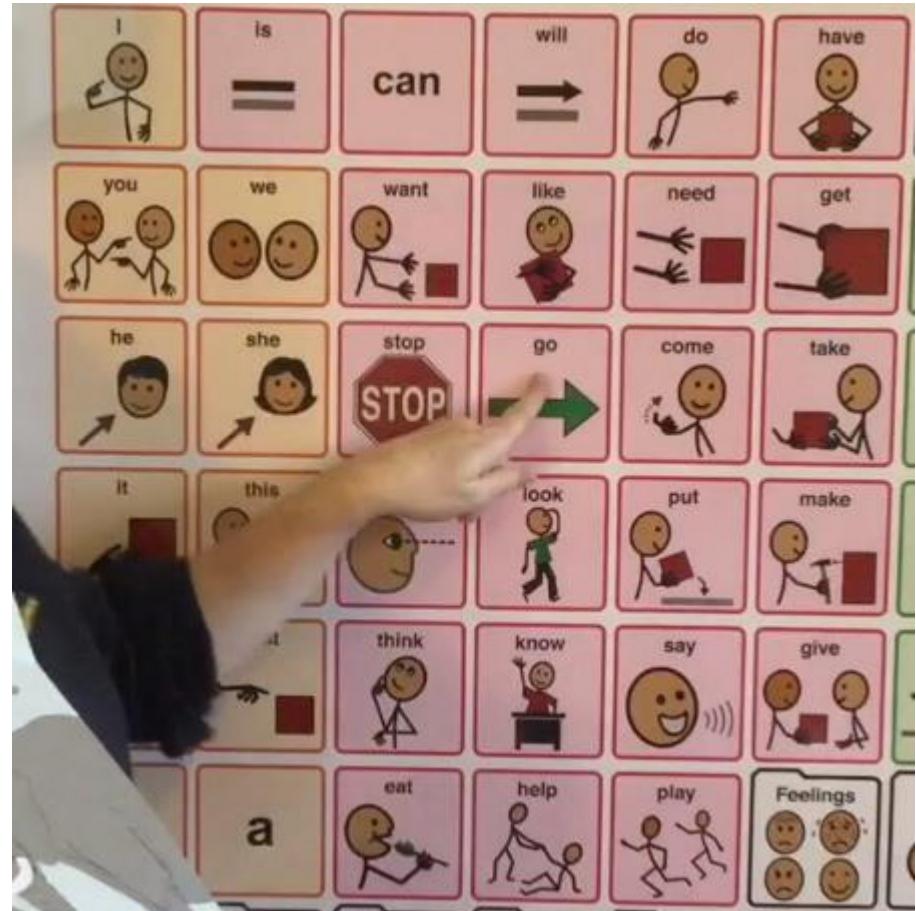
| | | | | | | |
|---|---|---|---|-----|---------------|---------------------|
| A | B | C | D | Yes | New word | |
| E | F | G | H | No | That is wrong | |
| I | J | K | L | M | N | Start again |
| O | P | Q | R | S | T | I need the bathroom |
| U | V | W | X | Y | Z | I am uncomfortable |

AAC systems for pointing/direct access



AAC systems for pointing/direct access

- There are many systems you can choose from
- You may need to create a hybrid that works for your client
- Remember to consider functional use, access and language



Text-based AAC

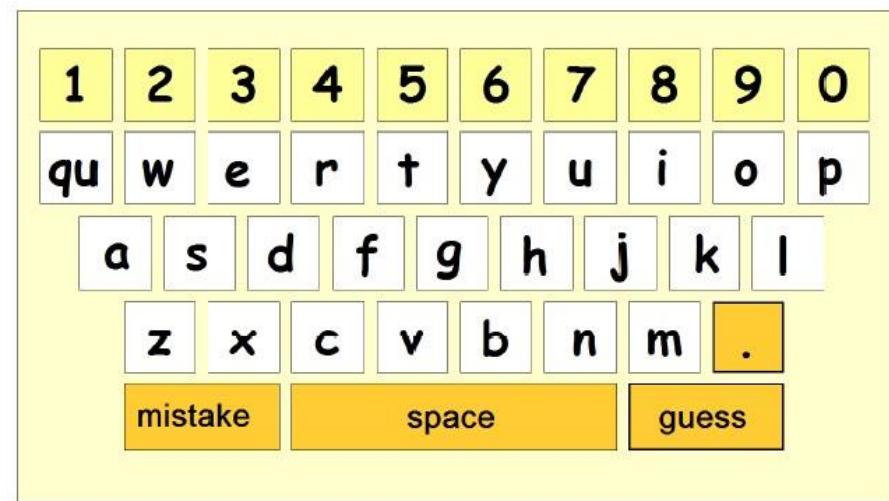
KEY QUESTIONS:

- Are uppercase or lowercase letters more familiar?
- Has a keyboard been used before? Is QWERTY or ABC preferred?
- Which colour combination is easier to read?
- How much movement is required to point to the letters? Which size is easier to see and reach?
- Where should the chart be positioned?
- Font size?

Text-based AAC



ABCD



QWERTY

Phrases

- Emergency phrases □ Such as “I’m going to have a seizure” or “I’m in pain”
- Partner Instructions □ Such as “I need a minute” or “It’s not on my device”
- Discourse Functions □ Such as “See you later” or “Excuse me”
- Questions □ Such as “Why is that happening?” or “Can we hang out again?”
- Predictable Routines ‘Medicine time’

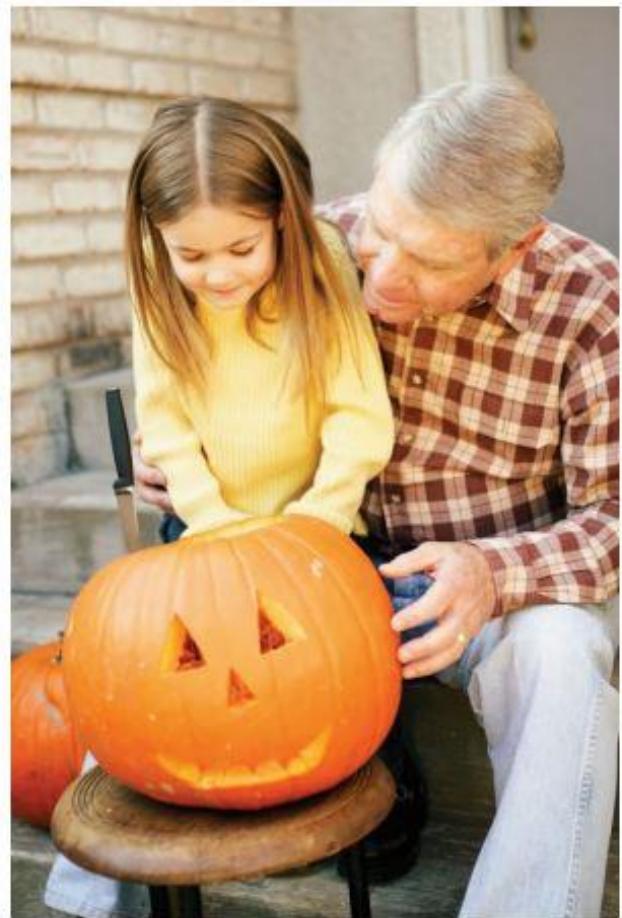
Adding phrases to charts



Topic boards

Visual Scene Displays

- Photographs that depict familiar environments, objects, activities or people that allow learners to convey a message that **relates to the scene**
- Make them **personally relevant**
- **Include the person** in choosing the photo/taken the photo and generating the utterances
- VSDs support **emerging communicators** and **context-based communicators** who have difficulty comprehending grid-based communication systems-e.g. **aphasia and LD**



Sierra

My grand daughter

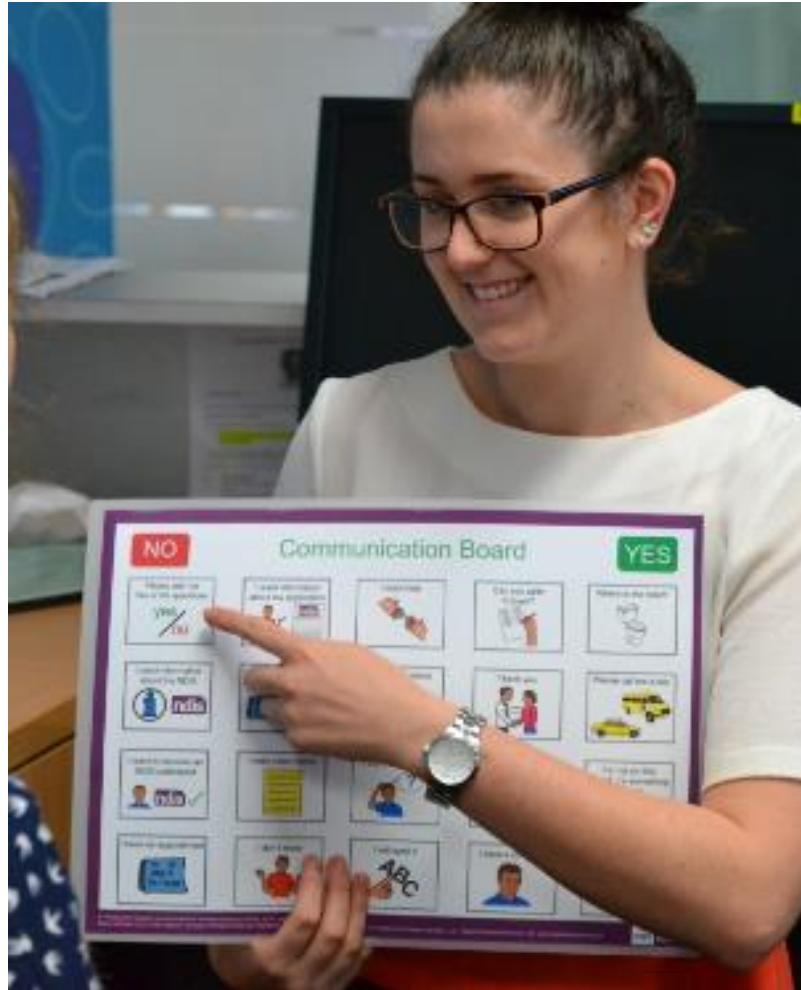
5 years old

Denver

Carving pumpkin

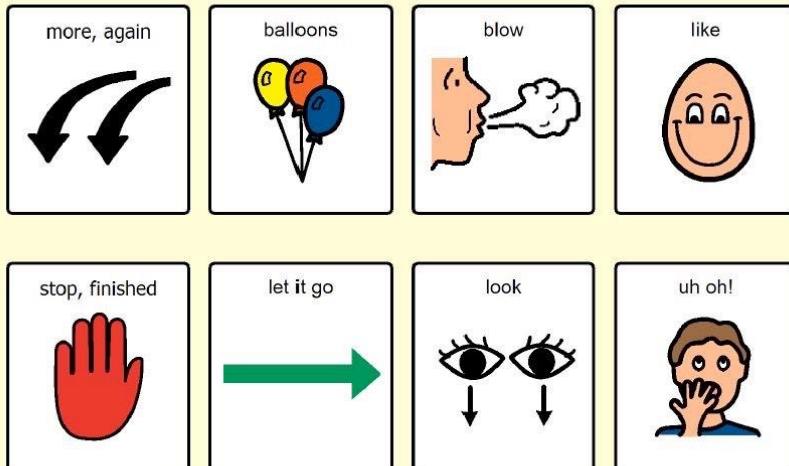
Halloween

Access difficulties



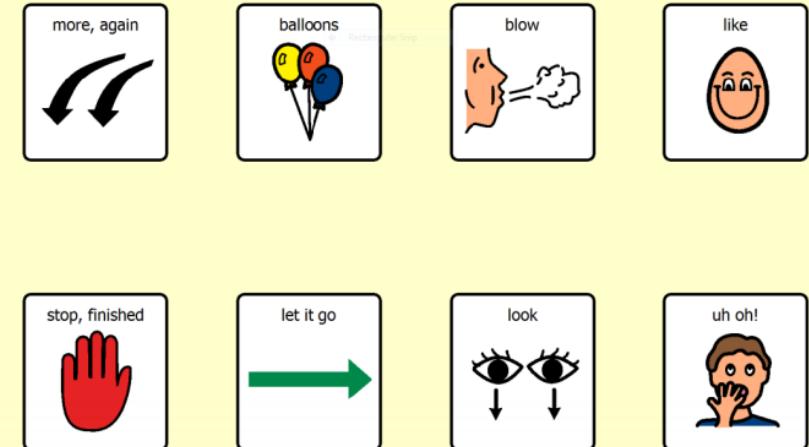
Spacing

Balloons Chart



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Balloons Chart (with bigger gaps)

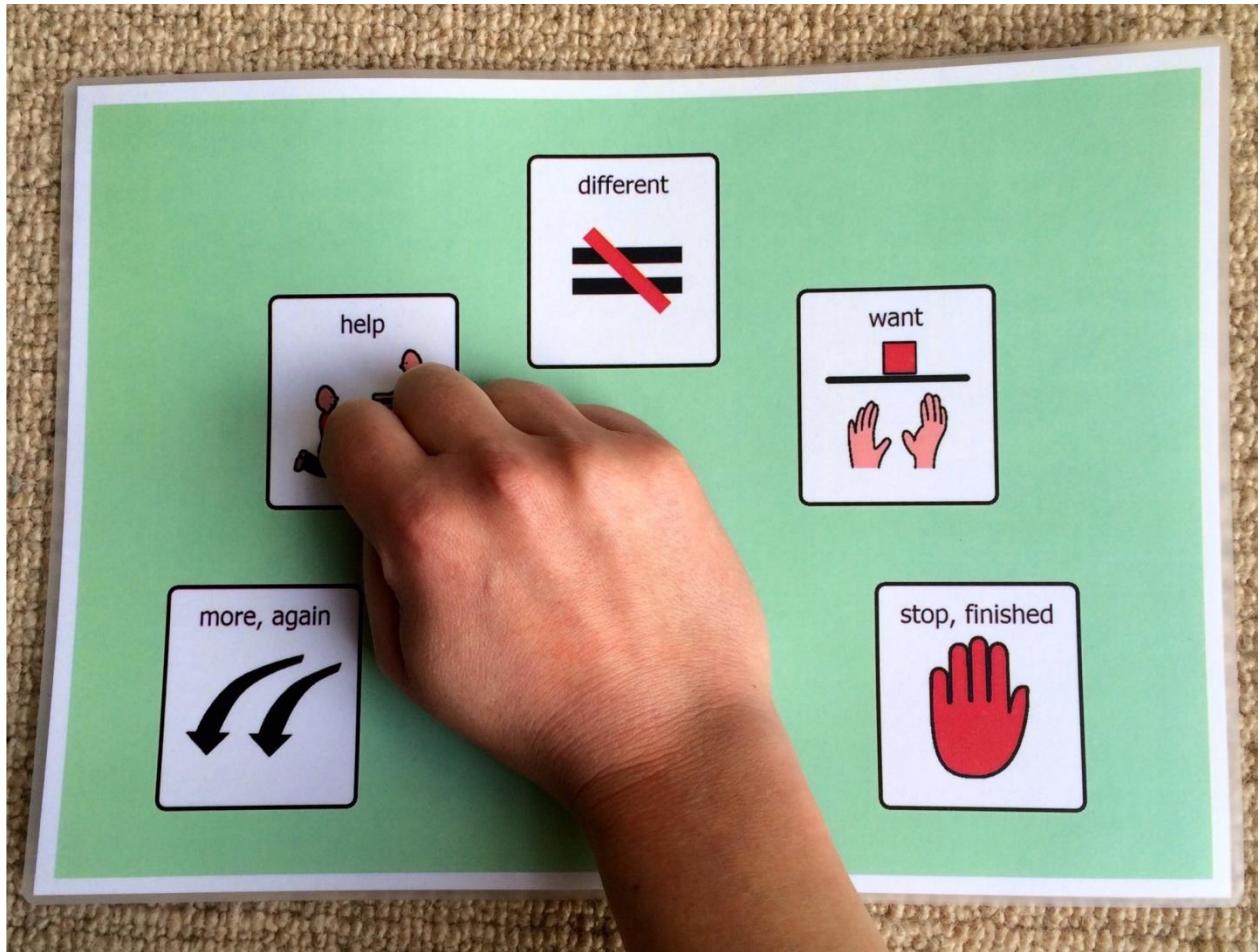


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Change the layout to fit the skills
– you can point with your fingers,
thumb, fist, eyes.

Smaller and further apart might help increase accuracy.

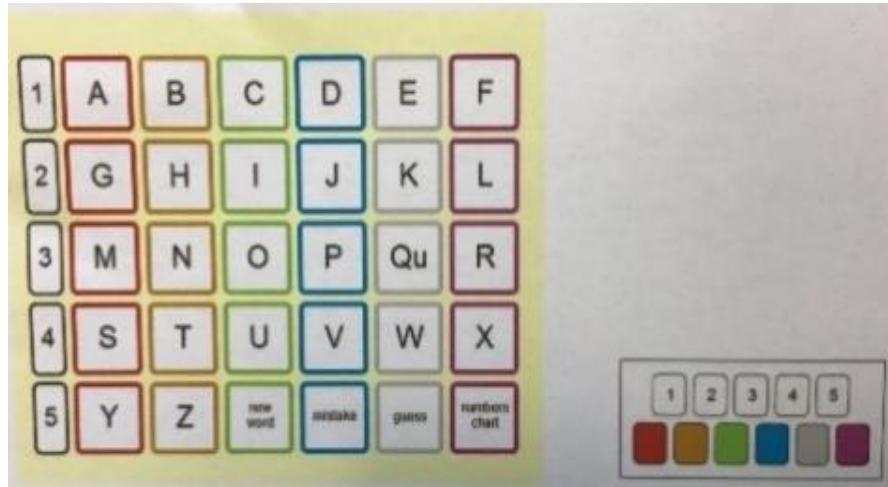
Spacing



Key guard or stylus



Colour coding- for minimal access direct



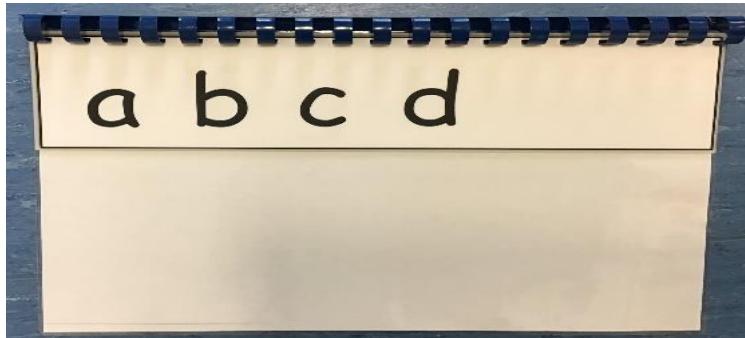
- ABC layout
- Coded Access – the small chart requires a smaller range of movement. Point to the NUMBER then the COLOUR to indicate the letter on the bigger chart
- The small encoded chart only requires a small movement to point to the numbers and colours.
- Coded access will add complexity to the task.

Partner scanning

Listener Mediated Scanning Charts

- These charts are used when the person doesn't have the physical movement to point to the letters.
- They may also have visual difficulties meaning that they cannot see the letters.
- The communication partner will read the options aloud. The person will need a reliable way of indicating 'YES'.

Partner scanning: examples



- Flipchart
- Simplifies the array of letters to choose from

| | | | | | | |
|----------|---|---|---|---|----|---|
| Row A | A | B | C | D | | |
| Row E | E | F | G | H | | |
| Row I | I | J | K | L | M | N |
| Row O | O | P | Q | R | S | T |
| Row U | U | V | W | X | Y | Z |
| Row No.s | 0 | 1 | 2 | 3 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 10 | |

Colour coded for listener mediated scanning (red row, yellow row etc)

Partner scanning: how?

- THERE MUST BE a way of communicating ‘yes’

There are two ways of making selections:

1. The individual **waits** until they see/ hear the desired option and then indicates **‘yes that’s the one I want’** by an agreed movement or vocalisation, or by activating a single message voice output communication aid that says “yes” or similar.

or
2. The individual communicates **‘no’ after each option offered (by an agreed movement or vocalisation, or even by activating a second single message voice output device)** until they see and / or hear the desired option and then indicates **‘yes that’s the one I want’**.



Yes & no responses

- Ensure all agree
- Unconventional gestures are ok
- Some examples include: eyes up for yes/down for no, hand raise for yes, looking at yes/no cards
- Put it on chart/in a book



Partner scanning: key questions

- *How does the person indicate ‘yes’?*
- *Does the person need to see and hear or hear the letters read aloud or just see the letters pointed to (visual + auditory scan/auditory scan/visual scan)?*
- *Does the communication partner need to write down the letters as they go along to keep track?*
- *How is an error or mistake addressed?*
- *Does the person mind if I predict what they want to say?*

Partner scanning: phrase lists and books

Please read through these and the person can tell you which one she/he needs-it is quicker if you check the category with them first e.g. A,B,C or D

A. Emergency/IMPORTANT:

1. Call my husband
2. Call Paramedics
3. I need medicines
4. Toilet
5. Drink

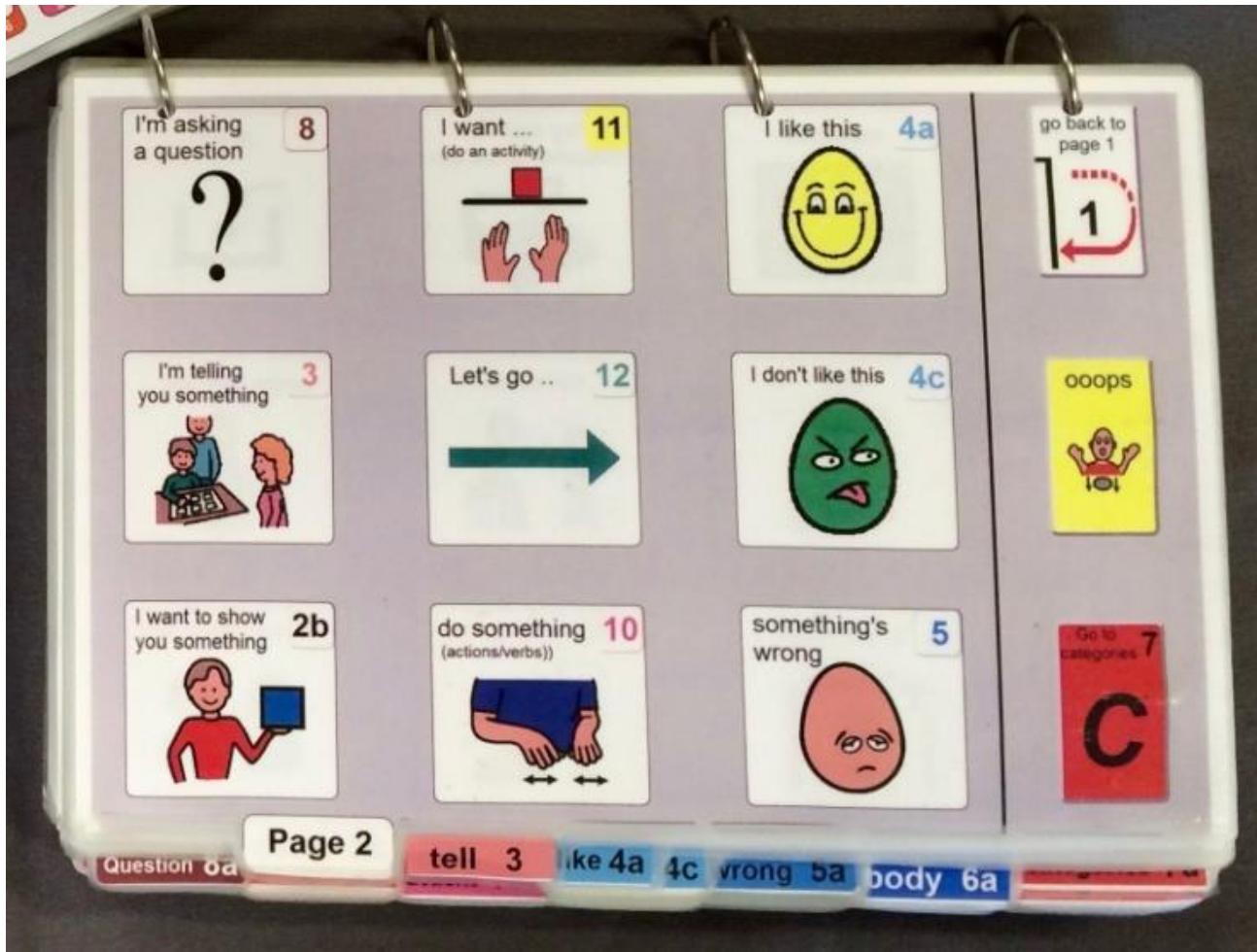
B. Wash related:

6. Wipe my face
7. Wipe my nose
8. Wipe my mouth
9. Brush my teeth
10. Wash my hair
11. Brush my hair
12. Put Vaseline on my lips
13. Medicines

C. Comfort:

14. I am uncomfortable
15. Move my arms
16. Move my legs
17. Move my head
18. Reposition me

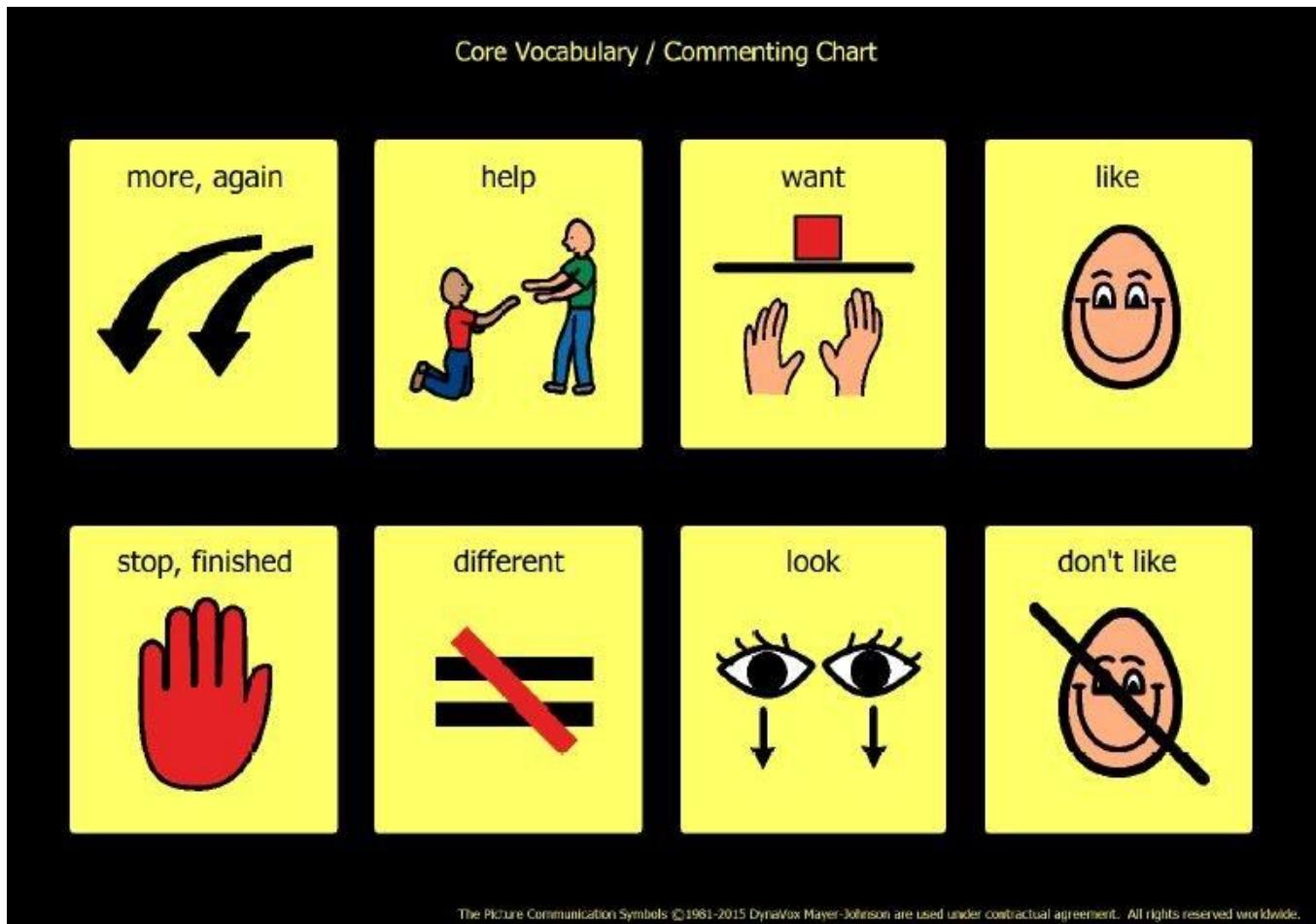
Partner scanning: PODD



Partner scanning: communication book



Vision



Visual impairment symbols sets

original

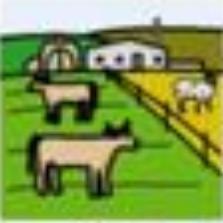


cereal

modified



Line thickness, proximity and perspective



farm



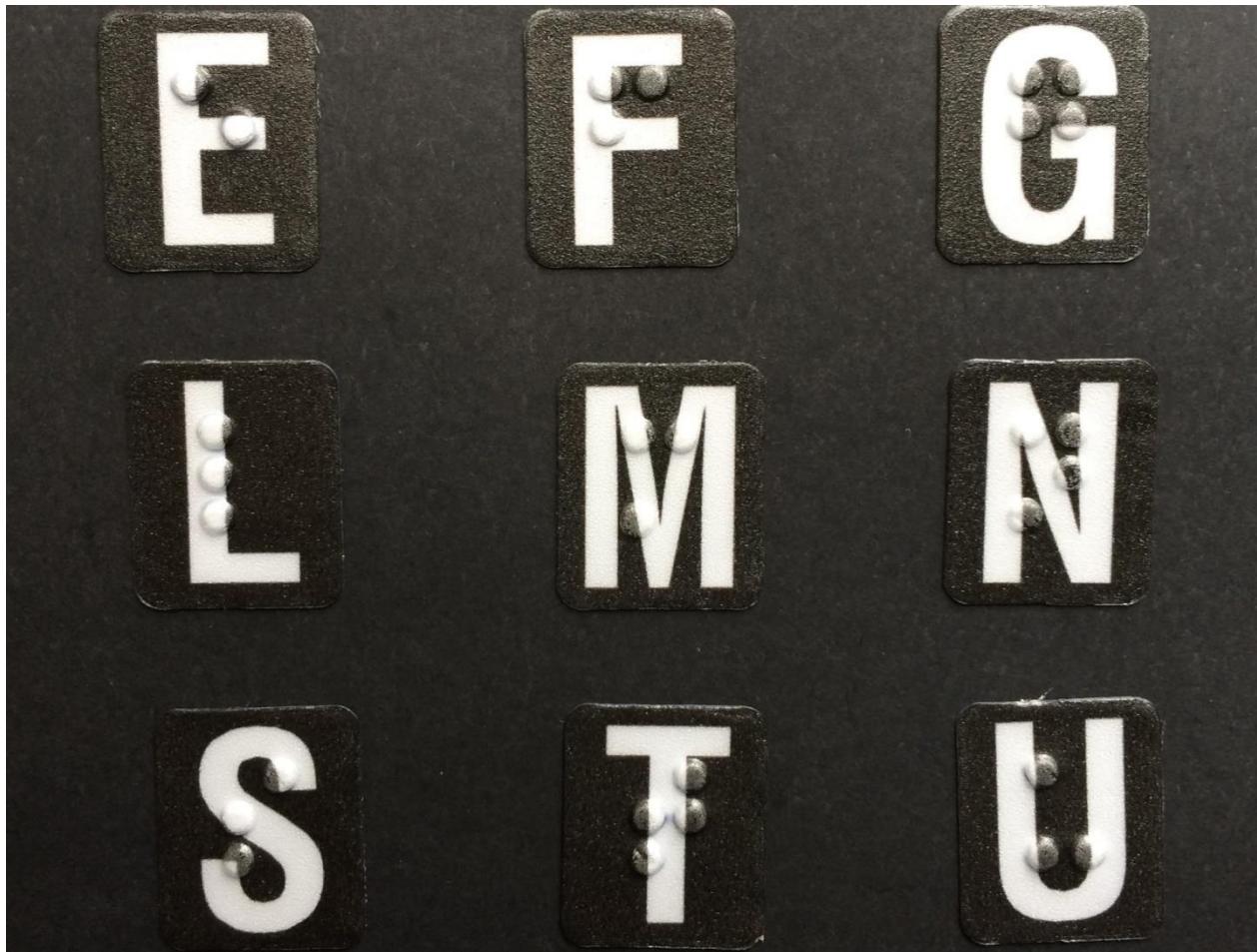
farm

Widgit

PCS



Tactile letter charts



Eye pointing



E-tran frame



- Position the frame between yourself and the user
- The user will look at the letter they want and you will follow their eyes
- Symbols can also be used

E-tran frame: encoding

Encoding is used to make it clear which letter/symbol they are looking at.



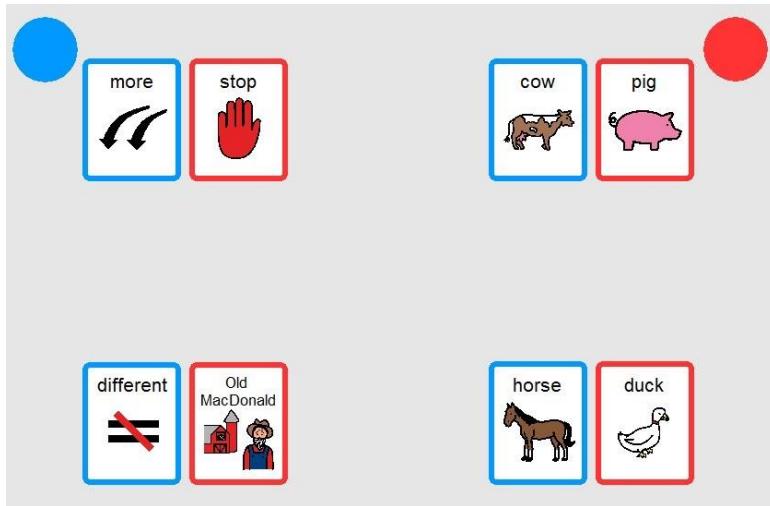
Steps for the user:

1. Look to the **group of letters/symbols**
2. Identify which letter/symbol you want by **looking towards the colour of the group it is in** e.g. Look at block ABCDEF, then look at YELLOW indicates 'B'.

E-tran frame: key questions

- *Can all the colours be seen?*
- *Is the person colour blind?*
- *Can the person move their gaze from left to right and up and down?*
- *Where is the best position for the chart?*

Encoding types



Encoding with dots



Encoding with outer borders

E-tran frame: tips

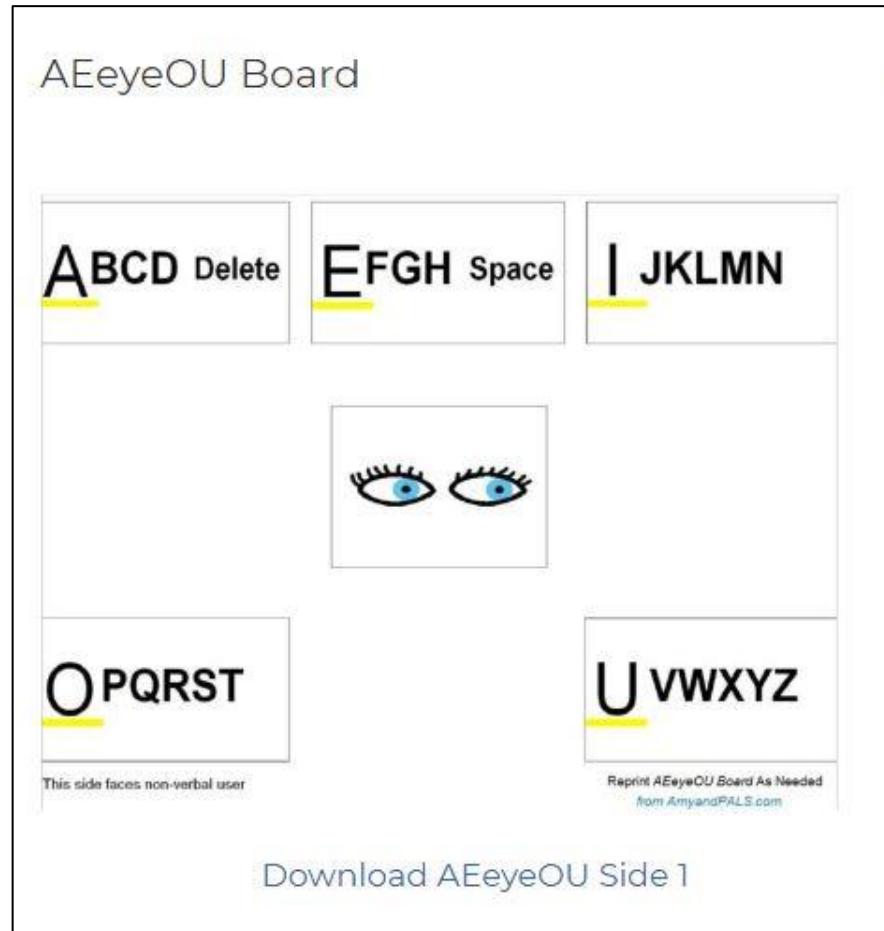
- When someone is communicating using eye pointing, make sure you **give them feedback** on where you think they are looking as you respond.
- It can be helpful to make a statement such as:
 - “I think you are looking here [tap the symbol]”
 - “I think you’re telling me the letter m”
 - “You’re looking at the bed symbol”

E-tran frame: encoding with phrases

Speak Book is available at:
<http://www.speakbook.org/>

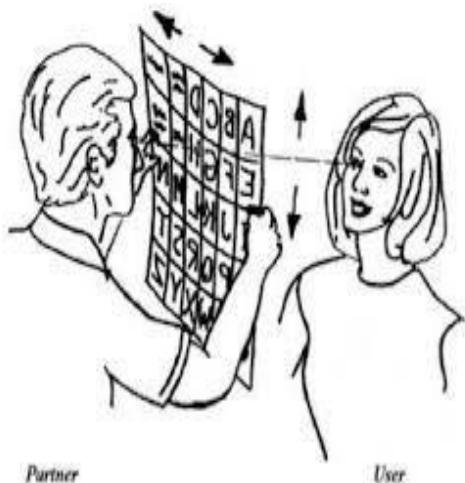


Combined access- eye pointing then scanning



Available at: <http://amyandpals.com/communication-boards/>

EyeLink



Have the patient at the same time as you focus on the smiley face in the middle of the sheet.

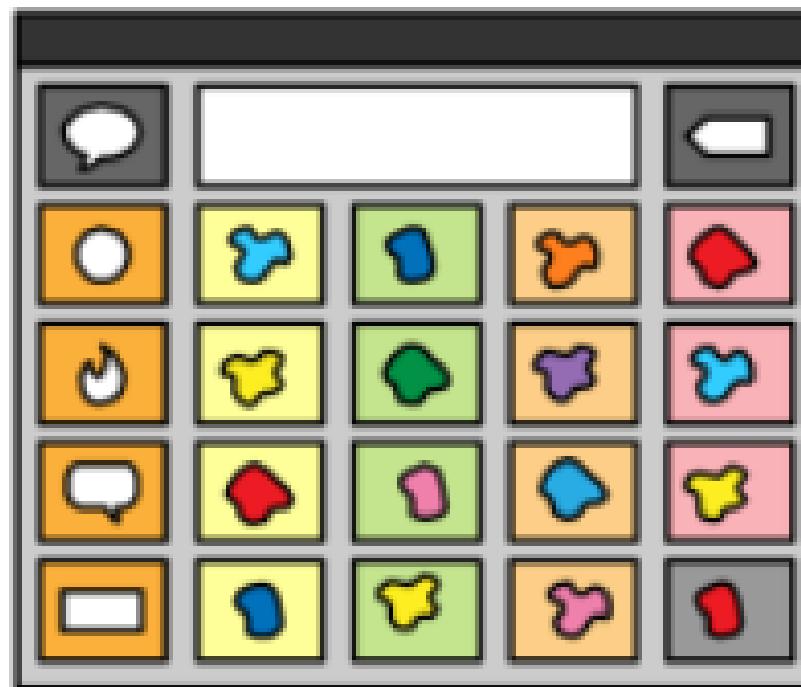
Then, have the patient focus on the first letter of the desired word.

Move the sheet until your eyes “link” with the patient’s through the desired letter. It should be a straight line between you, the letter and your patient’s eyes.

Head movement: laser pointer attached to head/glasses



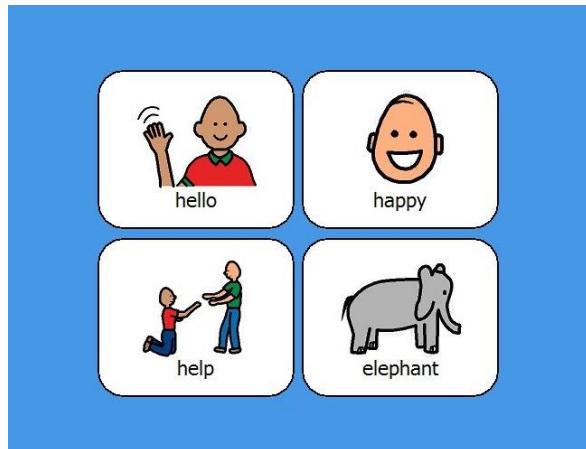
Symbol Vocabulary



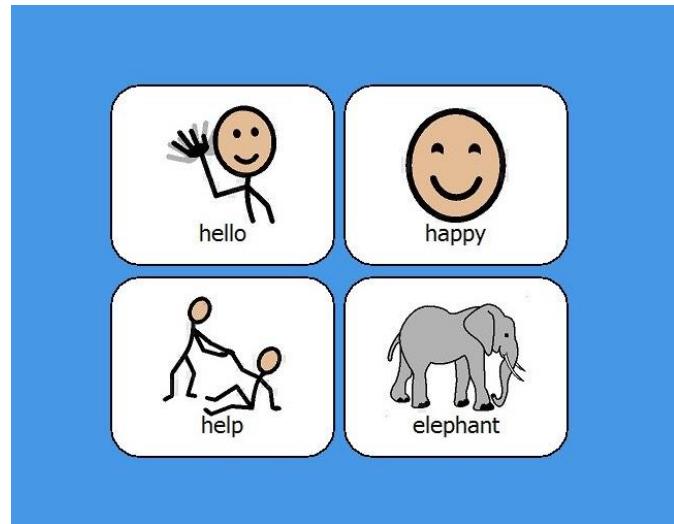
When to use symbols

- Symbols **represent ideas and words** a person want to talk about
- For people who have language or cognitive difficulties or English is not a first language
- Iconicity - some things are not easily 'photographable'
- It is handy if people use a **similar picture language** rather than everyone using different ones

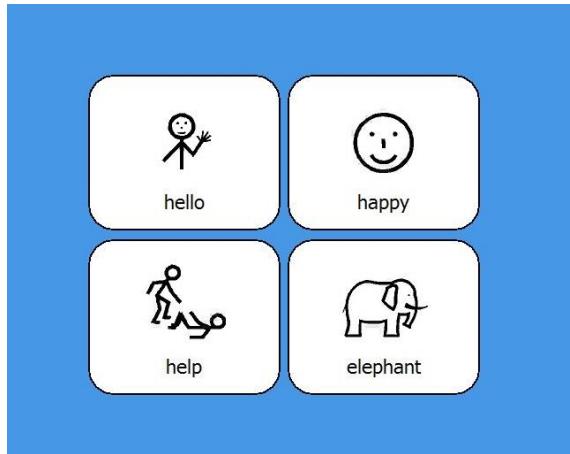
Symbol sets



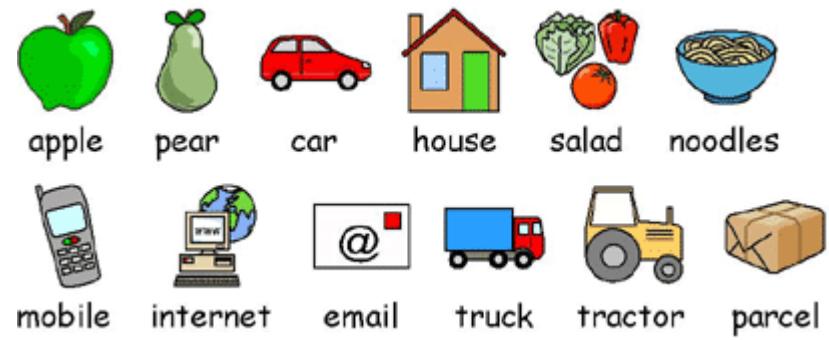
PCS



Symbol Stix



Makaton



Widgit

Meal Time



PCS In Context



ThinLine – In Context

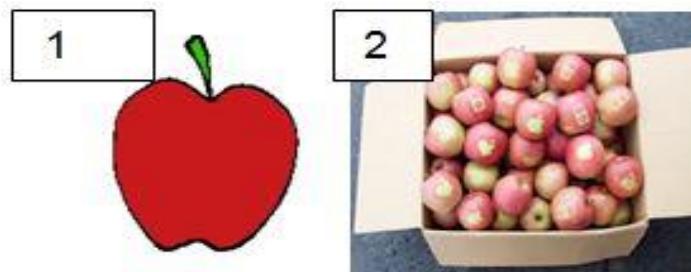


- Created for the Stroke and Brain Injury vocabulary in Compass
- Illustrative images featuring various contexts applicable to adult living

Hierarchy of symbol recognition

Most important when recognising symbols:

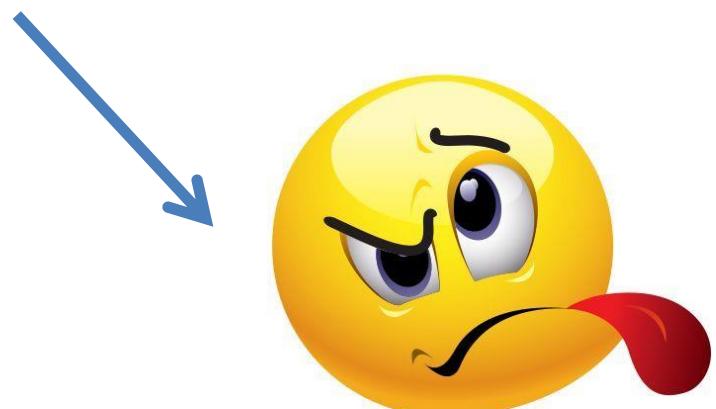
- The individual's experience
- The individual's ability to learn
- 'Iconicity' of the symbol
- Information available at:
<https://www.talkingmats.com/the-hierarchy-of-visual-representation/>



Choosing symbols

Think about:

- what they have used before
- symbol system on their high tech device if they have one
- the dangers of 'free' symbols-uurgh!



What about photos?

- The **detail** in a photograph can make it difficult to perceive the image and they may find it easier to see a symbol.
- ASD clients can have weak central coherence
- BUT photographs can be a great way to represent specific things on a communication chart e.g. mum

cookie



Choosing vocabulary

- Know the individual's **preferences**
- Identify and analyse daily routine
- Communication needs/opportunities in **various environments**
- Consider **communication partners**
- Use a tool such as **Talking Mats** to generate vocabulary



Symbol users: communication books

- Many types with different layouts
- No right or wrong format
- Must meet the communication need



Organising vocabulary

- Tailor to individual needs
- Consider learning vs function
- Variety of ways to organise symbol vocab based on:
 - Activity
 - Category
 - Language
 - Language (core focus)
 - Specific approaches: PECS and PODD

Organising vocabulary: activity

- Grouping is based on activity/situation
- This provides contextual cues for users
- Works well for predictable communication
- Limiting for users that need to express unique opinions/ideas
- Example: ‘At home’ folder on home page



- Opens onto a page with more vocab with some sentence starters



Organising vocabulary: category

- Requires categorisation skills
- Noun-based
- Works well for requesting items
- Limiting for users that need to express unique opinions/ideas
- Works well in conjunction with language based organisation



Organising vocabulary: language

- Grouping is based on linguistics
- Encourages language and literacy development
- Allows for flexible and unique expression



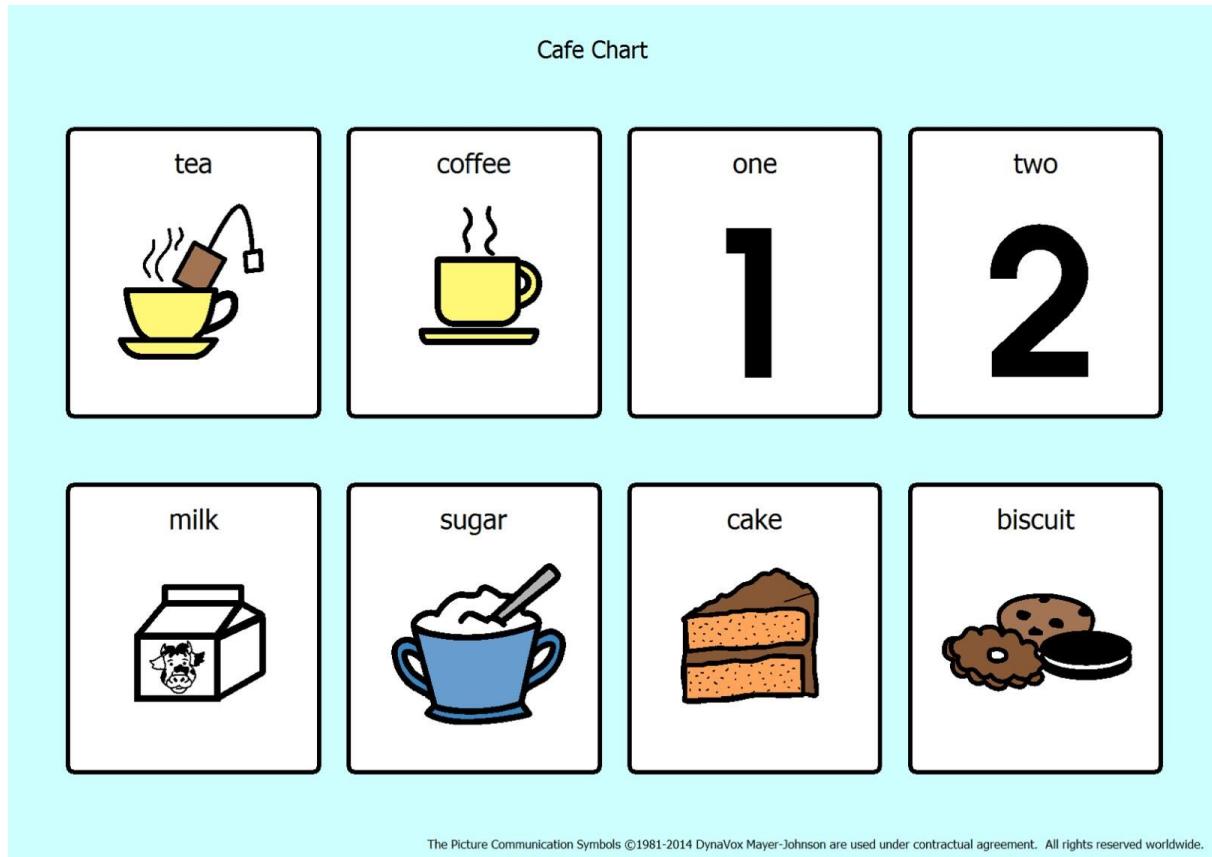
Organising vocabulary: core words

- Core vocabulary (verbs, pronouns, adjectives, prepositions)
 - Frequently used words (80%)
 - Small number of words (400-500)
 - Use across contexts and environments
 - Various parts of speech
 - Need symbols to depict them
- Fringe Vocabulary
 - Infrequently used words (20%)
 - Large number of words (thousands)
 - Topic and situation specific
 - Mostly nouns

e.g. 'Can we go to Starbucks to get a Latte?'

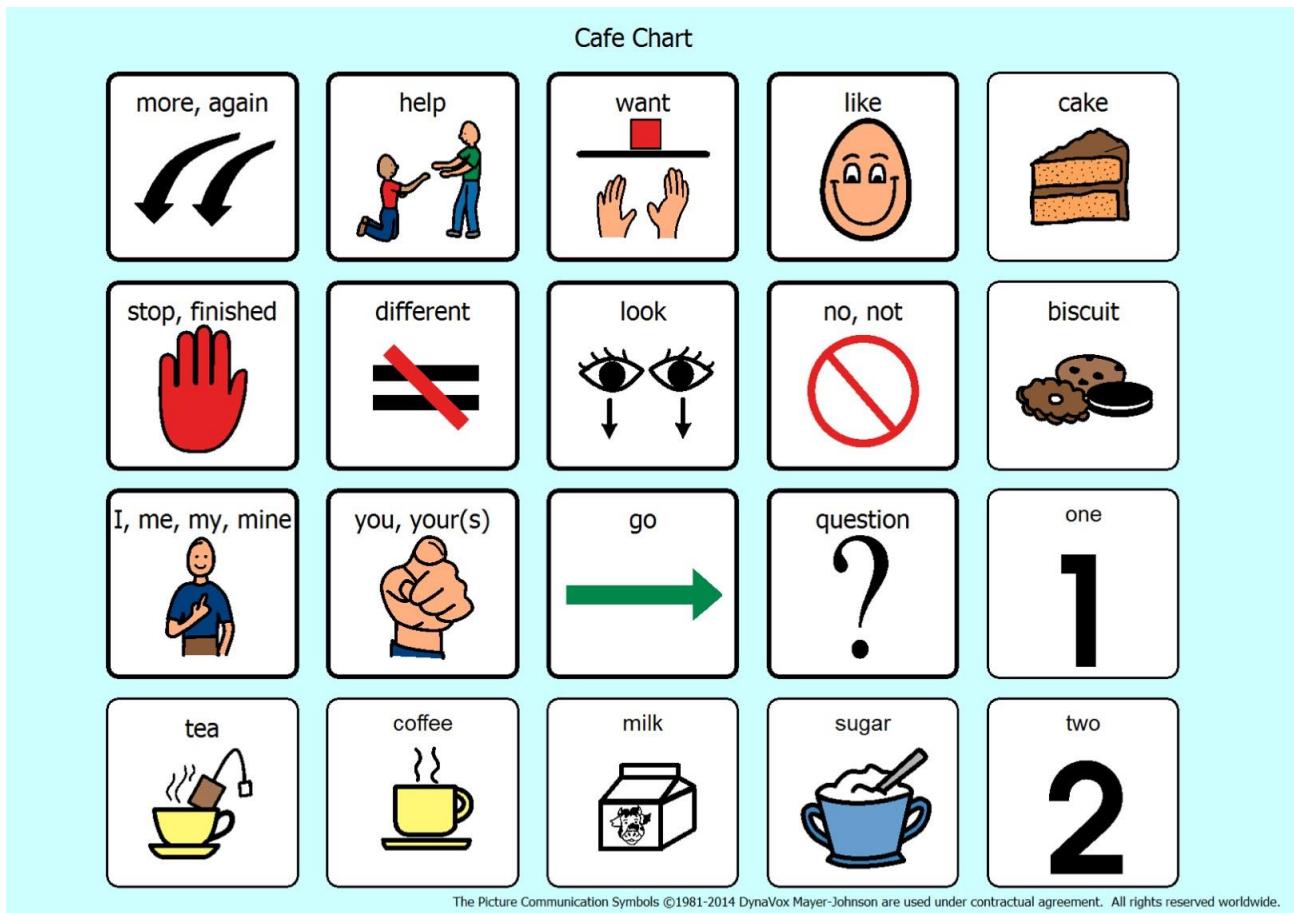
Demonstration

Fringe based communication chart



Demonstration

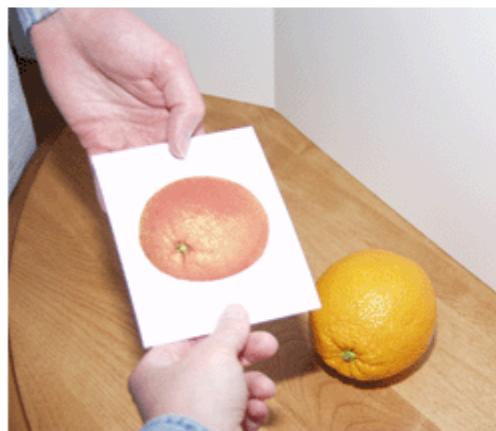
Fringe & core communication chart



Core & fringe book



PECS - Picture Exchange Communication System

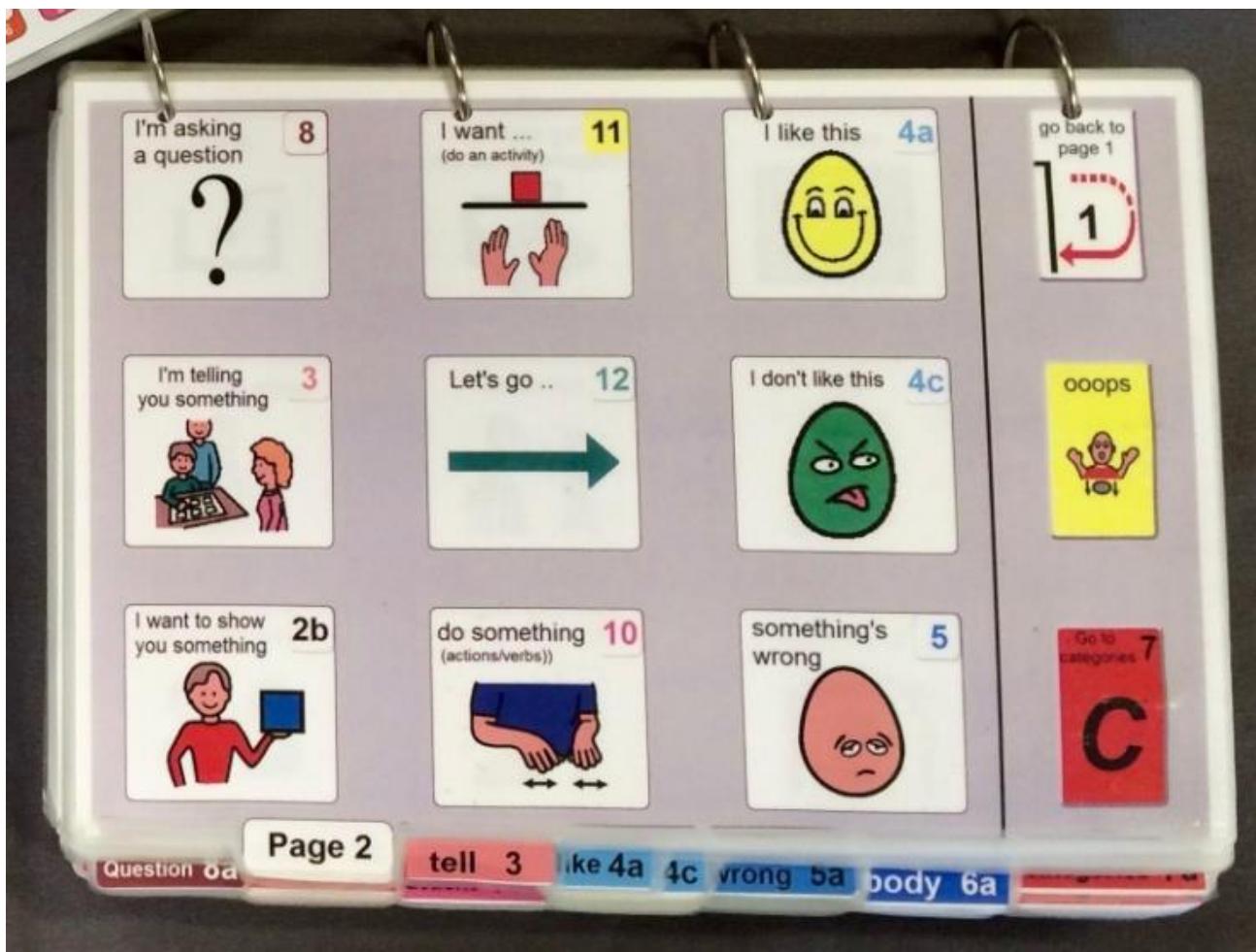


Request an item



Receive the item

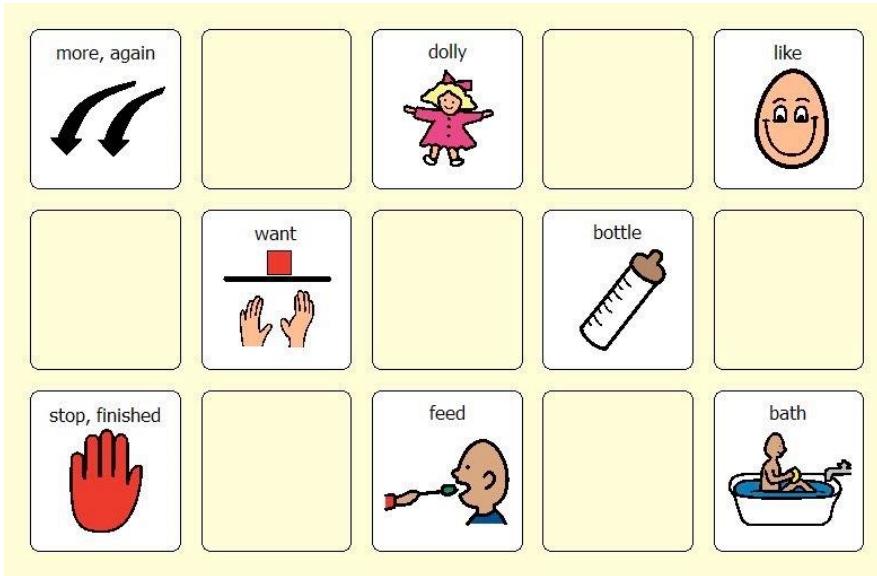
PODD (Pragmatic Organisation Dynamic Display)



Consistency of placing

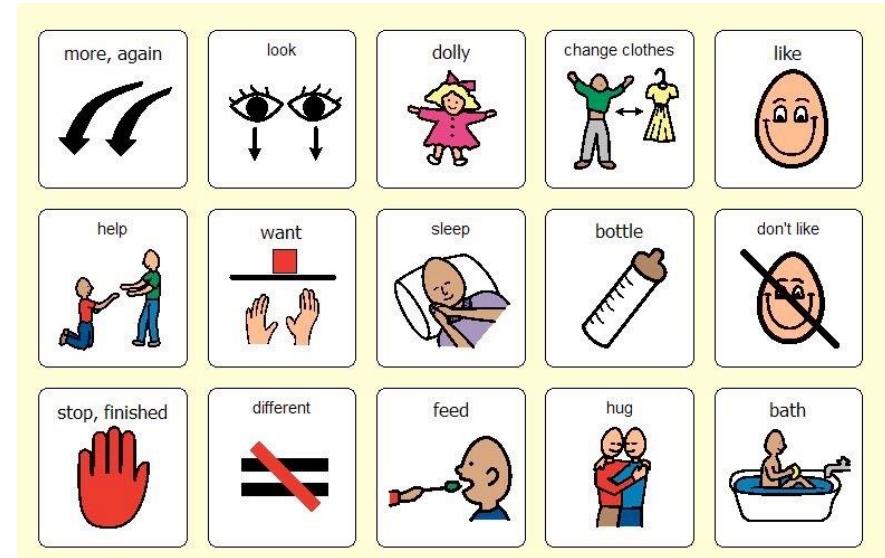
- Make sure you put the same words in the **same places** e.g. 'more' in top left corner of every page.
- Plan for the future when designing a communication chart
- If you feel that someone can only cope with ten symbols for now but that you would like to move them on - create a chart with ten cells now, and hide the other spaces..

Consistency examples



I can only
manage 8
now..

...I might
manage
more later..



AAC Colour schemes

- Colour can help to make the symbol stand out on a page.
- High contrast colours like yellow and black can help some people to see the symbol more clearly.
- Colour coded system can relate to whether the word is a noun, verb, adjective etc.
- Examples of such systems include the Fitzgerald key

The modified Fitzgerald key is as follows:

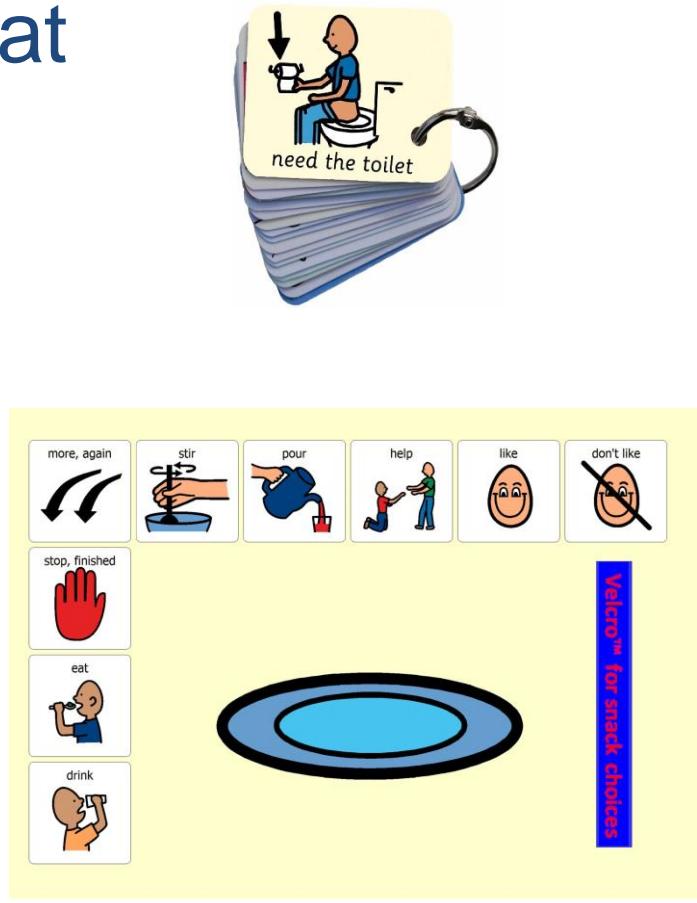
- Blue: Adjectives
- Green: Verbs
- Yellow: Pronouns
- Orange: Nouns

Example- colour coding



Examples of how low tech symbol systems can be used:

- Dinner mat
- Wallet
- Book
- Chart
- Keyring
- Lanyard
- strips



Modelling



- Use the AAC system to talk to the AAC user – value their method
- Modelling supports responsiveness and use of AAC for people with complex communication needs (Beck et al, 2009)
- Model as often as you can
- Point to symbols while you talk.
- For e.g. if they are watching a television programme and laughing, you could comment, “You like this”, while pointing to a ‘you like’ symbols
- Fine to make mistakes!
- Modelling for adults with progressive conditions?

Modelling

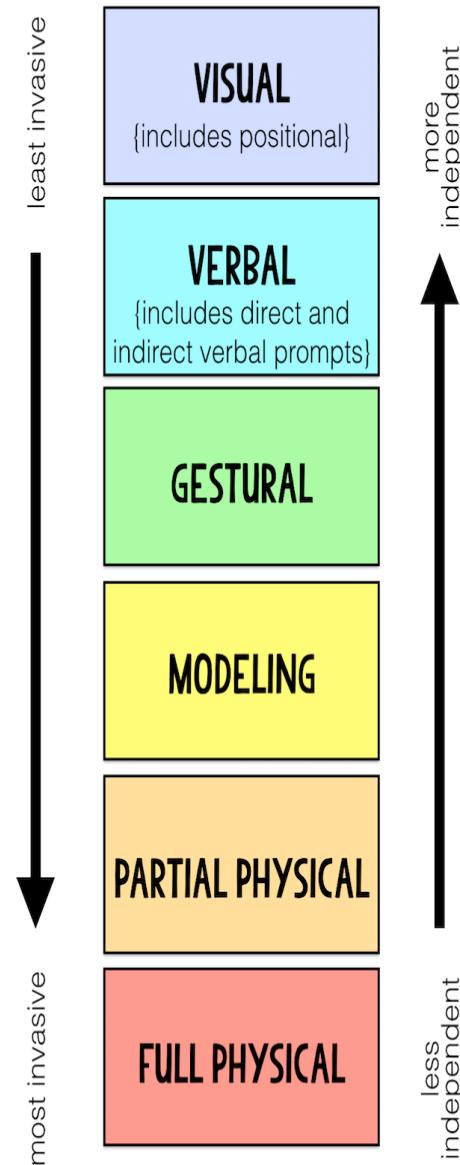
The average 18-month-old has been exposed to 4,380 hours of oral language at a rate of 8 hours/day from birth. A child who has a communication system (AAC) and receives speech/language therapy 2 times/week for 20-30 minutes will reach the same amount of language exposure (in their AAC language) in 84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

Jane Korsten, SLP

ASD and modelling

- Consider joint attention and imitation skills
- May need to work on these skills first
- May need to provide more direct prompting initially
- But beware of prompt reliance!
- Fade prompting as soon as possible

PROMPT HIERARCHY



Closing tips and tricks



Clear AAC guidelines

- Richard looks up for ‘yes’:

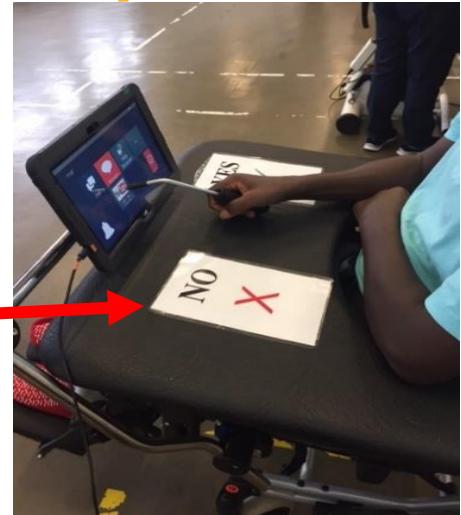


- Richard looks down for ‘no’:

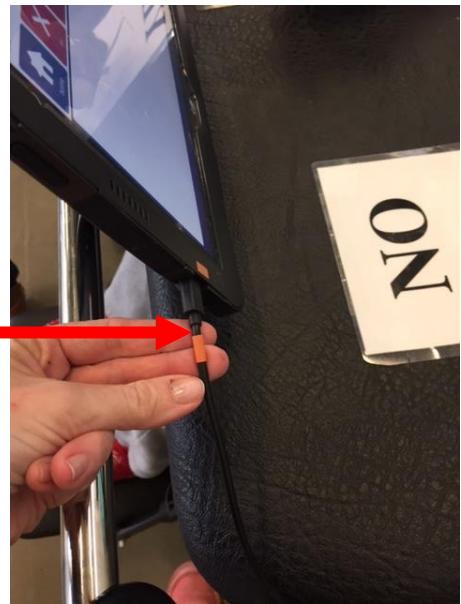


AAC Guidelines examples

- David uses a special stylus to point to his yes/no cards and to type on the device:



- The charger is inserted into the right side of the device and is labelled orange:



Making low-tech resources

- Invest in appropriate materials e.g. laminator, symbol software, keyrings and bungee cord
- Go online for inspiration or ask us-no need to reinvent the wheel!
- <http://lowtechsolutions.org/>
- Resource list at the end of this power point



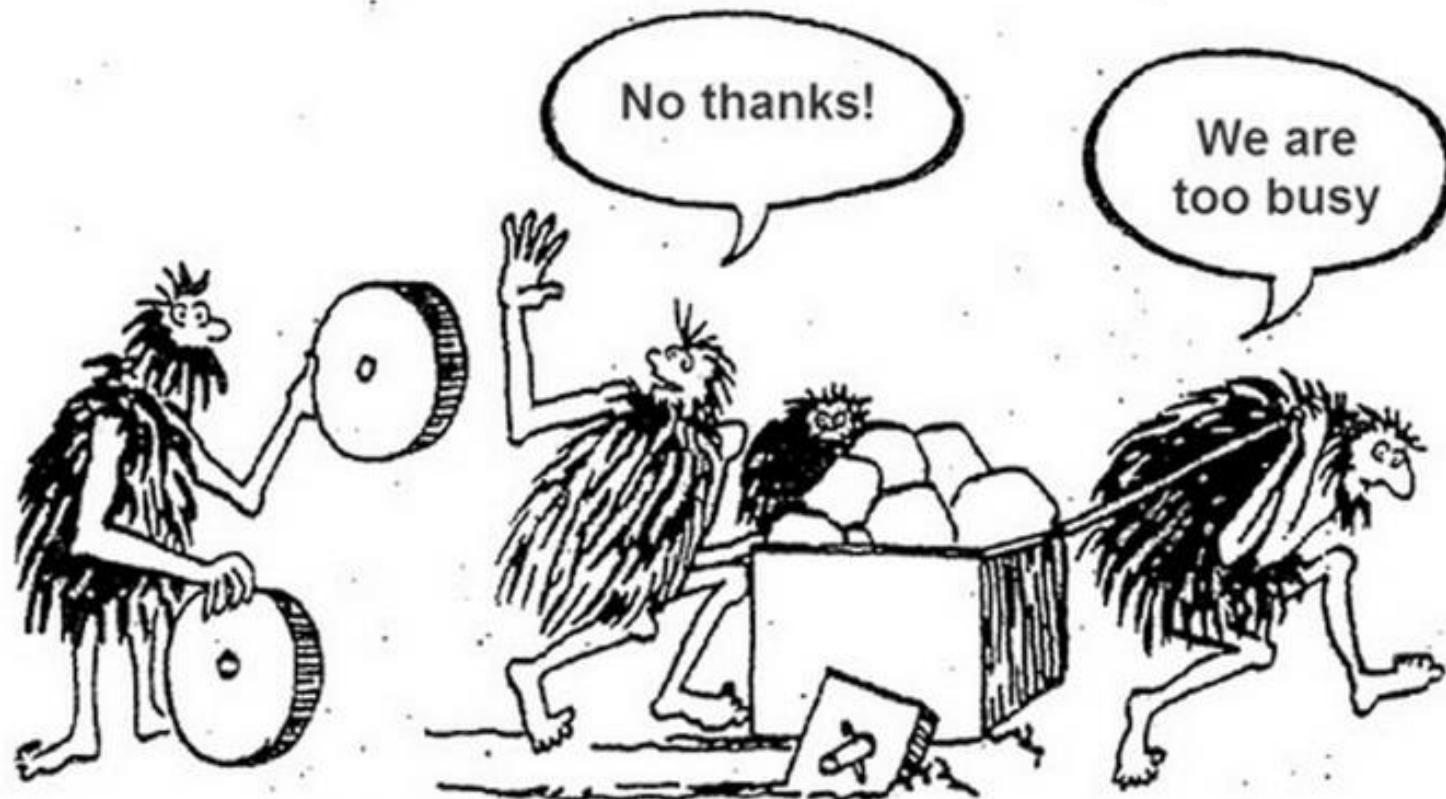


Thank you for listening!
Any Questions?

compass@rhn.org.uk
0208 780 4500 ext 5965

<https://www.rhn.org.uk/what-makes-us-special/services/compass/>

Don't reinvent the wheel!



Charts in other languages

Widgit

<http://widgit-health.com/downloads/for-professionals.htm>



Eastern Health charts

<https://www.easternhealth.org.au/site/item/152-cue-cards-in-community-languages>



You are here: Home / Site

Cue Cards in Community Languages

What Is It

Cue Cards is a new resource developed by Eastern Health Language Services to assist health professionals and clients / carers who primarily have English language difficulties or problems communicating with each other.

Resource list

- <http://lowtechsolutions.org/>
- <http://www.patientprovidercommunication.org/gallery/>
- <http://www.speakbook.org/>
- <http://amyandpals.com/communication-solutions-gallery/>
- <http://widgit-health.com/downloads/for-professionals.htm>
- <http://www.talkingmats.com/>
- <https://acecentre.org.uk/resources/>
- <https://barnsleyat.wordpress.com/2015/02/20/means-reasons-and-opportunities/>
- <http://praacticalaac.org/practical/aac-vocabulary-lists/>
- <http://aacbooks.net/book1/>
- <https://rerc-aac.psu.edu/aac-for-aphasia-a-review-of-visual-scenes-display-project-webcast/>
- <http://praacticalaac.org/practical/five-resources-for-making-and-using-visual-scene-displays/>
- <https://cehs.unl.edu/aac/visual-scene-resources/>
- <https://www.assistiveware.com/blog/assistiveware-core-word-classroom>

Key References

Battye, A. 'Who's afraid of AAC: *The UK Guide to Augmentative and Alternative Communication*' (2018) Oxon: Routledge.

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