

## Assessment and Intervention Protocols for children with multiple disabilities and sensory disabilities

Our recommended assessment procedure addresses the following questions:

1. Who is the child? -- including: interests, likes and dislikes, skills, and other strengths
2. What are the child's "special needs"? Why is the child receiving special education?
3. Who is the child's family and "circle of support"? -- including: hopes and dreams, needs and concerns
4. What are the student's routines and daily activities?
5. Looking first hand at the routines and activities, one at a time, what might help the child be more successful? Including,
  - talking and communicating?
  - moving and getting around?
  - playing and socializing?
  - learning and remembering?
  - making choices and having control?
  - participating with friends?
  - increasing independence?
  - helping others?

6. Which IEP goals and objectives should we look at for Assistive Technology? (prioritizing 2 or 3), including

- language and communication
- play and socialization
- nutrition
- mobility and positioning
- "readiness" skills
- self help
- activities of daily living
- behavior
- Circle of Friends

7. Looking at the priorities (identified in #6) what Assistive Technology may be helpful?

- # 1. "no tech"
- # 2. "low tech"
- # 3. "high tech"

*In each case, we ask team members the following:*

8. Is the child positioned appropriately to see, hear, pay attention, communicate and move?

9. Is there dependable access to a computer for the child to receive "computer assisted instruction?"

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We ask that one (or perhaps several) routines or activities be prioritized for an initial "try out" intervention. The initial try-out phase should be implemented daily over a period of 2-weeks, including videotaping at 3 "touch points" (near the beginning, middle and end). At the third video "touch point", the outcomes of the initial intervention should be summarized -- including suggestions for modifications, improvements and "next steps."

A second try-out phase should follow -- similar in design to the first, for an additional 2-week period, including continued videotaping of "touch points."

After the try-out period, the videotape is shared with a "tele-assessment" team via video conferencing.

The intervention process will include the following team activities:

- design an intervention plan -- including "no tech," "low tech," and "high tech" supports
- create and/or locate appropriate media
- create and/or locate appropriate software (both commercial and "locally" developed)
- create and/or locate other appropriate Assistive Technology (e.g., switch toys)
- implement the plan on a daily basis for a minimum of 4-weeks
- evaluate the student learning outcomes, and
- propose "next steps" for Assistive Technology supports

## Augmentative and Alternative Communication

There are a variety of devices and supports that can be used to augment a person's spoken communication. These range from low (or no) tech items, such as cardboard communication boards to high tech devices such as computers based dedicated augmentative communication devices. Basic questions to consider are how the child currently communicates; what the child needs to be able to do that they cannot currently do; and how a child would access a device(e.g., would he point to something, hit a switch, touch a key, look at the desired item...?)

1. *The student's and family's hopes and dreams for communication:*

2. *Student's present means of communication (Check all that are used, then circle the primary method the student uses.)*

- Δ Changes in breathing patterns
- Δ Eye-gaze/eye movement
- Δ Gestures
- Δ Sign language approximations
- Δ Vocalizations, list examples \_\_\_\_\_.
- Δ Single words, list examples and approx. # \_\_\_\_\_.
- Δ Reliable "no"
- Δ 2-word utterances
- Δ Semi intelligible speech, estimate % intelligible: \_\_\_\_\_.
- Δ Communication board: Δ tangibles, Δ pictures, Δ combination words & pictures, Δ words
- Δ Voice output AC device (name of device): \_\_\_\_\_.
- Δ Intelligible speech Δ Writing
- Δ Other:
- Δ Body position changes
- Δ Facial expressions
- Δ Pointing
- Δ Sign language (# signs \_\_\_\_\_)
- Δ Reliable "yes"
- Δ 3-word utterances

**Augmentative and Alternative Communication (cont.)**

3. *Who understands the student's communication attempts:*

	Most of the time	Part of the time	Rarely	Not Applicable
Strangers	Δ	Δ	Δ	Δ
Teachers/Therapists	Δ	Δ	Δ	Δ
Peers	Δ	Δ	Δ	Δ
Siblings	Δ	Δ	Δ	Δ
Parent/Guardian	Δ	Δ	Δ	Δ

4. *Communication interaction skills:*

	Always	Frequently	Occasionally	Seldom	Never
Turns toward speaker	Δ	Δ	Δ	Δ	Δ
Interacts with peers	Δ	Δ	Δ	Δ	Δ
Aware of listener's attention	Δ	Δ	Δ	Δ	Δ
Asks questions	Δ	Δ	Δ	Δ	Δ
Requests clarification	Δ	Δ	Δ	Δ	Δ
Repairs communication breaks	Δ	Δ	Δ	Δ	Δ

Describe techniques student uses for repair (e.g., keeps trying, changes message, etc.)

**Augmentative and Alternative Communication (cont.)**

5. *Current level of receptive language:*

Age approximation: \_\_\_\_\_

Formal tests used and scores: \_\_\_\_\_.

If formal testing is not possible, give an approximate age or developmental level of functioning. Explain your rationale for this estimate.

6. *Current level of expressive language:*

Age approximation: \_\_\_\_\_

Formal tests used and scores: \_\_\_\_\_.

If formal testing is not possible, give an approximate age or developmental level of functioning. Explain your rationale for this estimate.

7. *Past history of augmentative communication use:*

Describe any AAC systems that have already been tried with the participant. Discuss the results, how the participant accessed them, how long they were used, and how well they worked. (Remember to include: gestures, sign language, communication boards, eye-gaze board, voice output devices, computer use, and/or switch use.)

System used

Length of Time

Results

## Augmentative and Alternative Communication (cont.)

8. AC system will be used for: (Check all that apply)

- |  |  |   |                                   |  |
|--|--|---|-----------------------------------|--|
| <input type="checkbox"/> Class assignments   | <input type="checkbox"/> Homework        | <input type="checkbox"/> Recreational activities      | <input type="checkbox"/> Outdoors | <input type="checkbox"/> While being transported       |
| <input type="checkbox"/> At home with family | <input type="checkbox"/> Socialization   | <input type="checkbox"/> Special activities at school |                                   | <input type="checkbox"/> During meals, toileting, etc. |
| <input type="checkbox"/> To answer questions | <input type="checkbox"/> To request help | <input type="checkbox"/> In the community             |                                   | <input type="checkbox"/> Other...                      |

9. Any device selected must: (Check all that apply)

- |   |   |  |  |
|---|---|--|--|
| <input type="checkbox"/> Be portable                              | <input type="checkbox"/> Fit wheelchair | <input type="checkbox"/> Be carried by the child | <input type="checkbox"/> Be extra sturdy |
| <input type="checkbox"/> Contain large number of words or phrases |   |  |  |
| <input type="checkbox"/> Other: _____.                            |   |  |  |

10. Visual considerations when designing a picture board

- |   |   |
|---|---|
| <input type="checkbox"/> Can maintain fixation on stationary object | <input type="checkbox"/> Can look to right and left without moving head |
| <input type="checkbox"/> Can scan line of symbols left to right     | <input type="checkbox"/> Can scan matrix of symbols in a grid           |
| <input type="checkbox"/> Visually recognizes people                 | <input type="checkbox"/> Visually recognizes common objects             |
| <input type="checkbox"/> Visually recognizes photographs            | <input type="checkbox"/> Visually recognizes symbols                    |
| <input type="checkbox"/> Needs additional space around symbols      | <input type="checkbox"/> Can recognize line drawings                    |
| <input type="checkbox"/> Can decode sight words                     |   |

## Augmentative and Alternative Communication (cont.)

### 11. Lay-out considerations:

Is a specific type (brand) of symbols or pictures preferred?

What size of symbols or pictures are preferred?

Size of grid participant is able to access:

What is the smallest square the student can accurately access:      Δ 1 inch      Δ 2 inch      Δ 3 inch      Δ 4 inch

What is the optimal size grid?

Size of square: \_\_\_\_\_; Number of squares across: \_\_\_\_\_; Number of squares down: \_\_\_\_\_.

Does participant seem to do better with black on white, or white on black, or a specific color combination for figure/ground discrimination?

- *Explain anything else you think is significant about the participant's strengths or needs regarding augmentative communication.*
  
- *Summary of AAC, describe:*
  - the person's hopes and dreams for communication;
  - the tasks the person needs to be able to do;
  - the obstacles to accomplishing them;
  - possible solutions to be tried.

## Fine Motor Skills

If you are not sure how a student will be able to access an AC device or computer, it is suggested that you consult a Physical or Occupational Therapist. Also, remember that it is almost always more desirable for the person to be able to directly access a device, rather than to depend upon some form of scanning. The goal in considering fine motor ability is to determine how a person might be able to access an AAC device through direct selection. If direct selection is not possible, the goal becomes identifying a movement that can be used to activate a switch.

- Current fine motor abilities: Observe the student using a switch, paper and pencil, typewriter, computer, etc. Look at the movements as well as the activities and situations. Does the student have voluntary, isolated, controlled movements using: (Check all that apply)

Left hand       Right hand       Eye(s)       Left arm       Right arm       Head       Left leg       Right leg  
 Mouth       Left foot       Right foot       Tongue       Finger(s)       Eyebrows       Other \_\_\_\_\_

Describe the activities/situations observed:

- Range of motion: Describe the specific range in which the person has the most motor control.

How many inches is the range of movement? \_\_\_\_\_

- Abnormal reflexes and muscle tone: Describe briefly any abnormal reflex patterns or patterns of low or high muscle tone which may interfere with the person's voluntary motor control.
- Accuracy: Describe how accurate, reliable and consistent the student is in performing a particular fine motor task.
- Fatigue: Describe how easily the student becomes tired.
- Assisted direct selection: What type(s) of assistance for direct selection have been tried?

Head pointer/head stick/chinstick       Keyguard       hand grips, splints and pointers       Light beam

Other: \_\_\_\_\_

Describe which seemed to work the best and why:

**Fine Motor Skills (cont.)**

- Scanning: If the student cannot direct select, scanning may be necessary.

What is the preferred control sight for a switch? \_\_\_\_\_.

Other possible control sites: \_\_\_\_\_.

- Type of switch: Circle the one or two that seem to work best.

Δ Jellybean Δ Vibrating Δ Musical Δ Pillow Δ Wobble Δ Other: \_\_\_\_\_.

## SEATING AND POSITIONING

This section should be completed with the help of an occupational or physical therapist. The questions asked are to help the team focus on how seating and mobility may affect performance.

- Current seating and positioning of student (check all that apply)

- Δ sits in regular chair with feet on floor
- Δ sits in adapted chair
- Δ sits in wheelchair part of the day
- Δ wheelchair needs to be adapted to fit
- Δ spends part of day out of chair due to prescribed positions
- Δ enjoys many positions throughout the day, based on activity
- Δ uses regular desk
- Δ uses adapted table

- Δ sits in regular chair with pelvic belt or foot rest
- Δ needs adapted chair
- Δ sits comfortably in wheelchair most of the day
  
- Δ spends part of day out of chair due to discomfort
- Δ has few opportunities for other positions
- Δ uses tray on wheelchair for desktop

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## SEATING AND POSITIONING (cont.)

- Description of seating
  - △ seating provides trunk stability
  - △ seating allows feet to be on floor or foot rest
  - △ seating provides 90/90/90 position
  - △ there are questions or concerns about the student's seating
  - △ student dislikes most positions, often indicates discomfort
  - △ student has difficulty using table or desk
  - △ student has difficulty achieving and maintaining head control
  - △ best position for head control is: \_\_\_\_\_
  - △ can maintain head control for how long in this position?

*Summary of Seating and Positioning, describe:*

- the person's hopes and dreams for seating and positioning;
- the tasks the person needs to be able to do;
- the obstacles to accomplishing them;
- possible solutions to be tried.

## MOBILITY

This section should be completed with the help of an occupational or physical therapist.

- Mobility (check all that apply)

- Δ walks independently
- Δ walks with assistance
- Δ needs extra time to reach destination
- Δ crawls, rolls or creeps independently
- Δ uses manual wheelchair independently
- Δ has potential to use power wheelchair, but has not had the opportunity
- Δ needs help to transfer in and out of wheelchair
- Δ uses wheelchair for long distances only
- Δ has difficulty walking down stairs
- Δ has difficulty walking
- Δ walks with appliance
- Δ is pushed in manual wheelchair
- Δ transfers independently
- Δ has difficulty walking up stairs

- Concerns about mobility (check all that apply)

- Δ student seems extremely tired after ambulating, requires a long time to recover
- Δ student seems to be having more difficulty than in the past
- Δ student complains about pain or discomfort
- Δ changes in schedule require more time for travel
- Δ changes in location or building are making it more challenging to get around
- Δ transition to new school will require consideration of mobility needs

- *Summary of Mobility issues, describe:*

- the person's hopes and dreams for seating and positioning;
- the tasks the person needs to be able to do;
- the obstacles to accomplishing them;
- possible solutions to be tried.

## LOW VISION

There are a variety of assistive technology devices that can help a student who requires assistance due to low vision. These range from providing sharper contrast or thicker lines to providing talking word processing. A vision specialist should be consulted to complete this section.

1. Date of last vision report: \_\_\_\_\_

Report indicates (address any field loss, vision condition, etc.):

2. Visual abilities (check all that apply):

Δ Can read standard textbook print without supports:

Δ Can read text if enlarged to (indicate size in inches): \_\_\_\_\_

Δ Is eye fatigue a factor? Explain: \_\_\_\_\_

Δ Requires specialized lighting such as: \_\_\_\_\_

Δ Requires materials tilted at a certain angle (indicate the angle): \_\_\_\_\_

Δ Currently uses what magnifier supports: \_\_\_\_\_

Δ Prefers: Δ Black letters on white Δ White letters on black Δ other

Δ Tilts head when reading

Δ Uses only one eye: Δ right eye Δ left eye

Δ Cannot read text, requires taped material or voice synthesis on computer

### LOW VISION (cont.)

Skill Area	Method Accommodation	Material Accommodation	Assistive Technologies
Vision	<ul style="list-style-type: none"> <li>• enlarge worksheets</li> <li>• enlarge reading material</li> <li>• stories and materials on tape</li> <li>• change font on worksheets and tests</li> <li>• double-space worksheets and tests</li> <li>• use wide margins on worksheets</li> <li>• change the lighting</li> <li>• darker lines on paper</li> <li>• limit amount of info on a page</li> <li>• peer support</li> <li>• pen pal</li> <li>• mentor</li> <li>• multi-modal instruction</li> </ul>	<ul style="list-style-type: none"> <li>• magnifying glass</li> <li>• magnifying bars</li> <li>• page magnifiers</li> <li>• slant boards</li> <li>• paper holders</li> <li>• colored pencils, pens or paper</li> <li>• stencils</li> <li>• rulers</li> <li>• colored acetate sheets</li> <li>• colored stickers for visual cues</li> <li>• highlighter</li> <li>• word or sentence window</li> <li>• line marker, felt tip pen (thin or thick point)</li> <li>• raised line paper</li> <li>• large print books</li> <li>• recorded stories (Harcourt &amp; Brace)</li> <li>• peer support/cross-age tutors</li> </ul>	<ul style="list-style-type: none"> <li>• Lighting</li> <li>• Typewriter:                             <ul style="list-style-type: none"> <li>key labels</li> <li>key guard</li> <li>lighting</li> <li>typing instruction</li> <li>peer support/cross-age tutors</li> </ul> </li> <li>• Word Processor: same as above, plus...                             <ul style="list-style-type: none"> <li>enlarged text output</li> <li>large on-screen fonts</li> <li>Talking word processors (Write OutLoud)</li> <li>contrast/color</li> <li>enlarged cursor (e.g., Biggy)</li> <li>print in large font</li> </ul> </li> <li>• Copy Machine on enlargement</li> <li>• Books on tape (including selections from Harcourt &amp; Brace)</li> <li>• Talking Book Machine</li> <li>• Talking calculator</li> <li>• Closed-circuit television (CCTV)</li> <li>• Type and speak</li> <li>• Talking watch</li> <li>• Videos with descriptive narration</li> </ul>

## BLINDNESS

Skill Area	Method Accommodation	Material Accommodation	Assistive Technologies
Blindness	<ul style="list-style-type: none"> <li>• stories and materials on tape</li> <li>• puppets and tactile supports</li> <li>• multi-sensory instruction                             <ul style="list-style-type: none"> <li>- oral description</li> <li>- hands-on experience</li> <li>- story reading and listening</li> <li>- oral drills (spelling, math, general knowledge)</li> </ul> </li> <li>• teach keyboarding</li> <li>• peer support</li> <li>• pen pal</li> <li>• mentor</li> <li>• Braille</li> </ul>	<ul style="list-style-type: none"> <li>• recorded stories (Harcourt &amp; Brace)</li> <li>• tactile maps</li> <li>• Braille print materials</li> <li>• Songs in Braille</li> <li>• Videos in Descriptive Narration</li> <li>• Braille flashcards and games</li> </ul>	<ul style="list-style-type: none"> <li>• Perkins Braille</li> <li>• Braille Lite</li> <li>• Type and Speak</li> <li>• Talking calculator</li> <li>• Talking watch</li> <li>• Abacus</li> <li>• Computer:                             <ul style="list-style-type: none"> <li>Talking word processors (Write OutLoud or Intellitalk)</li> <li>Key guard</li> <li>Talking keys (Click It!)</li> </ul> </li> <li>• Tape recorder</li> <li>• Tape player</li> <li>• Talking Book Machine</li> <li>• Books on tape from Recordings for the blind</li> <li>• Tactile markers</li> </ul>