

# *Augmentative and Alternative Communication*

# **AAC**

## RESOURCE GUIDE *for* TEACHERS

Augmentative and Alternative Communication (**AAC**) includes all forms of communication that can be used to share ideas, make friends, and express needs and wants.

The use of **AAC** by people with complex communication needs (CCN) increases social interaction, school performance, and a feeling of self-worth.

**AAC** can be used to help people with CCN say and write whatever they want.

**AAC** systems must be personalized to reflect individual interests and needs.



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# What is AAC?

For some students with autism, cerebral palsy, Down syndrome, and other disabilities, speech may not fulfill all of their communication needs. For these students with complex communication needs (CCN), the use of Augmentative and Alternative Communication (AAC) can have important benefits (Blackstone, 1993, 2008, 2009). There are a wide range of AAC techniques available, including:

- Picture, symbol, alphabet, and word boards
- Signs and gestures
- Speech-generating devices (including specialized computer systems)

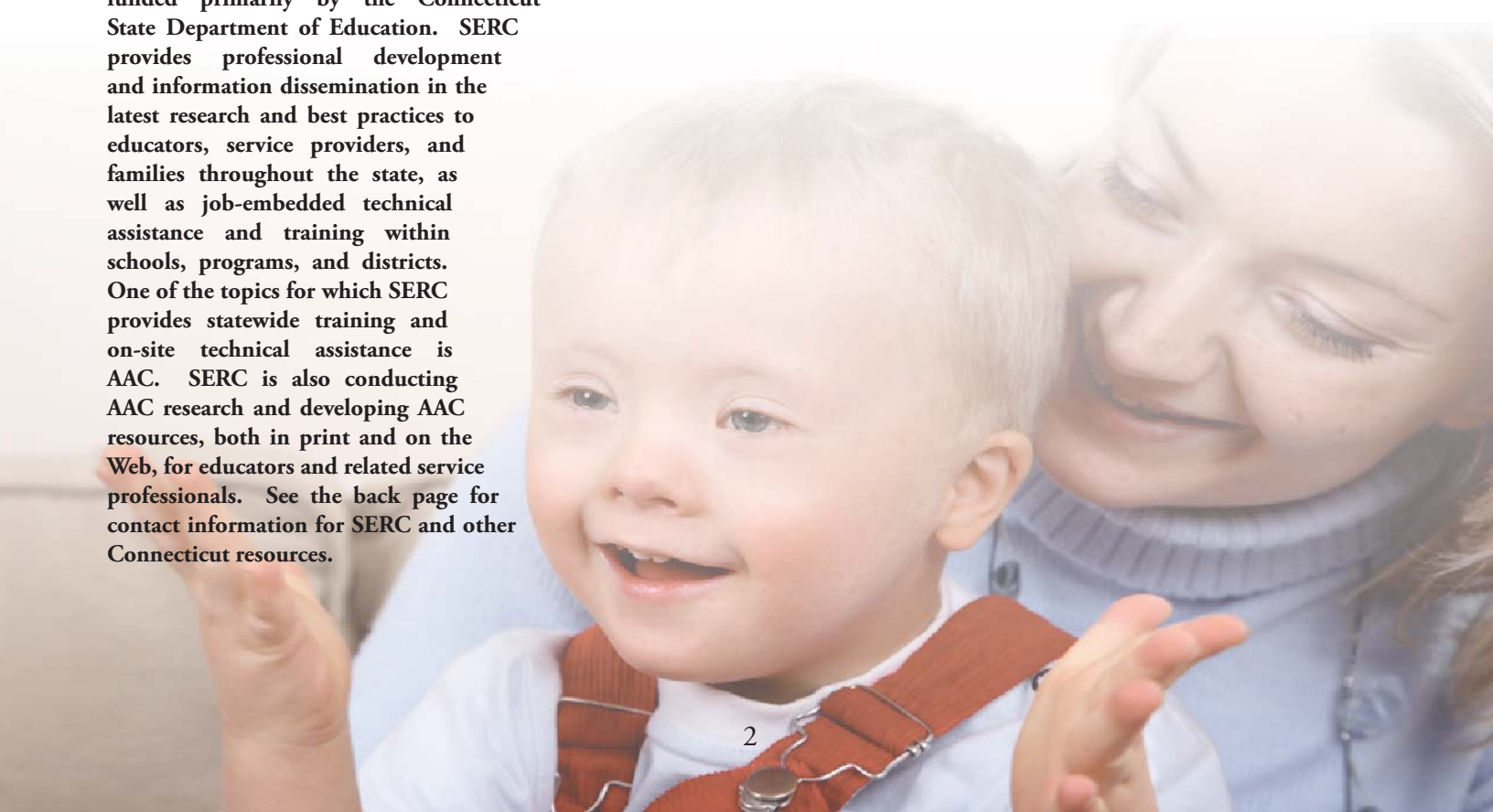
As with any assistive technology used in a classroom, teachers will need to know how to help their students use AAC effectively and efficiently. This guide provides an introduction to the ways students can use AAC to participate in classroom activities. It also describes the variety of resources available to Connecticut teachers working with students who would benefit from the use of AAC.

**The use of AAC systems can support participation for students at any age in a wide range of academic and social activities (Beukelman & Mirenda, 1998).**

One place Connecticut educators and families can turn to for support is the State Education Resource Center (SERC), a nonprofit agency funded primarily by the Connecticut State Department of Education. SERC provides professional development and information dissemination in the latest research and best practices to educators, service providers, and families throughout the state, as well as job-embedded technical assistance and training within schools, programs, and districts. One of the topics for which SERC provides statewide training and on-site technical assistance is AAC. SERC is also conducting AAC research and developing AAC resources, both in print and on the Web, for educators and related service professionals. See the back page for contact information for SERC and other Connecticut resources.



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# Why use AAC?

In order to participate in classroom activities, students need a way to ask and answer questions, provide information, interact with peers, and communicate. If a student has difficulty using speech, the student's individualized education program (IEP) team should consider the use of AAC to support communication. Even students who use limited speech might also use AAC systems to clarify their message when their speech is not understood. It is important that students with complex communication needs have an opportunity, as other students do, to communicate and to participate in a wide range of activities at school.



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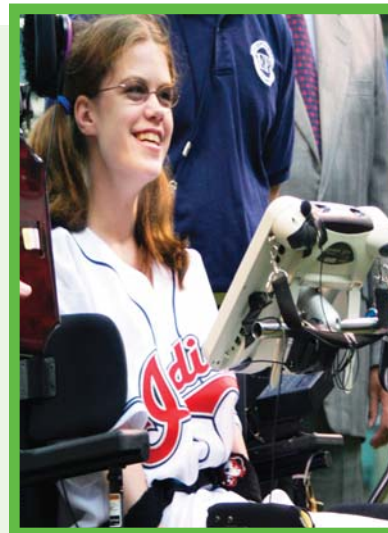
Children who have CCN can start using AAC from a very early age. Storybooks can be programmed onto communication devices to help them read and talk about the book. More examples of how to support communication with young children are available at: <http://aackids.psu.edu>

Other students may have very little speech and use their AAC system for much of their communication:

**Sara's story** Sara is a young woman studying rehabilitation services at college. She has cerebral palsy and uses a DynaVox Vmax (speech-generating communication device) to communicate, and also to write. Music is one of Sara's passions -- she has performed using her AAC system at cultural, sporting, and political events.

To view a video clip of Sara, go to: <http://www.dynavoxtech.com/success/cerebral-palsy/details.aspx?id=75>

To learn more about Sara's musical talent, visit her Web site at: <http://www.sara-sings.com/index.htm>



# How can AAC be used?

People use different ways to communicate, including speech, facial expressions, and gestures. For students with CCN, a wide variety of AAC techniques are available to support communication (Beukelman & Mirenda, 1998). Most people use a range of techniques to meet different needs at different times. For example, while waving hello is an appropriate greeting, individuals with CCN will need access to more specific vocabulary (perhaps using a word board or speech-generating device) to participate in a science class.

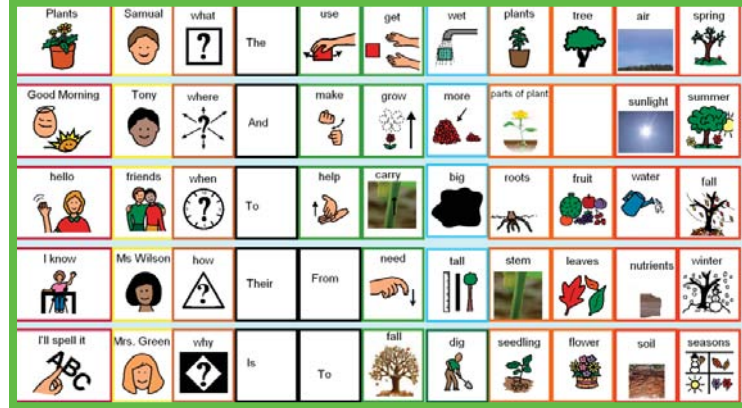


## How can AAC be used? (cont.)



### Picture, symbol, alphabet, and word boards

The use of communication boards with pictures, symbols, the alphabet, and words can provide access to the vocabulary needed for students with CCN to participate in school, at home, and in the community. There is an assortment of computer software available to help create picture and symbol boards. Below is an example of a picture display developed to support a student's participation in a discussion on plants.



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Notice that this communication board not only provides a way for the student to answer questions, it also includes vocabulary to form questions. In developing a communication display, the goal is to provide students who have CCN with access to the vocabulary used by their speaking peers.

Learning to read and write is especially important for children with CCN. Many people who use AAC make use of the alphabet to help clarify a spoken message (i.e., they make use of their speech and then spell a word if it is not understood), and they also make use of writing to prepare longer messages that may be difficult to speak aloud. For these individuals, their communication boards may include a combination of frequently used words as well as an alphabet to spell words “on the fly.”

Hello! My name is Sally. I communicate using this this communication display. I point to the words and alphabets with my middle finger. When I finish a word or sentence I will look up. Please read about the words and letters that I point to.

I	Me	To	A	All	That	The	These	Am	Every	Some	Please	Bag	1	2	3
It	We	Am	Are	Be	Call	Come	Eat	About	And	At	Thank you	Book	4	5	6
He	Him	Can	Could	Feel	Find	Get	Drink	Be-cause	But	By	Good	Bus	7	8	9
She	Her	Did	Do	Help	Hurt	Know	Give	Down	For	From	Cold	Food	Sun	0	\$
They	Them	Had	Has	Love	Make	Move	See	If	In	Off	More	Drink	Mon	Tue	Wed
You	Your	Have	Is	Need	Put	Read	-ed	Or	Over	Then	Really	TV	Thur	Fri	Sat
Don't	Not	Was	Were	Say	Tell	Think	-ing	Up	With		Very	Whee chair	Day	Time	Now
Can't	Won't	Will	Would	Use	Want	Work	-s	Opposite	For ward	Left	Un comfo table	Hrs	Mins	Today	
What	Where	Who	Which one	qu	w	e	r	t	y	u	i	o	p	space	Tomor row
When	How	Why		a	s	d	f	g	h	j	k	l	:	delete	Yeste rday
Ask me yes/ no questions	Start over	YES	z	x	c	v	b	n	m	.	,	?	NO	Finish	

As children who use AAC learn to read and write, they should have access to frequently used words. With the alphabet, they can spell the words they want. Supports for teaching students with CCN how to read and write are available at <http://aacliteracy.psu.edu>.



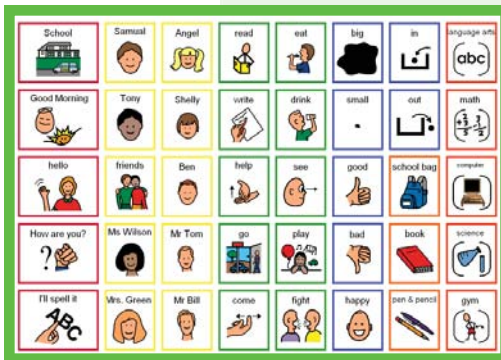


## Signs and gestures

The use of signs and gestures allows students with CCN to quickly express frequently used words (e.g., yes, no, who, what, when, why, where, please, thank you). Some individuals may learn to make use of a large number of signs, while others may use a smaller number of signs in combination with other AAC techniques.

For individuals who are beginning communicators and who are just starting to learn how their own behavior can influence the behavior of others, it is especially important that the teacher provides appropriate opportunities for communication, and recognizes and encourages a student's communication

attempts. In these situations, it may be appropriate for the teacher to offer choices of actual physical objects and to encourage the individual with CCN to point toward the desired item. A speech and language pathologist can assist in developing communication opportunities for beginning communicators. More information on working with beginning communicators is available at <http://aackids.psu.edu>.



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## Carr's story

Carr is an 8-year-old boy with Down syndrome who is fully included in a general education classroom. He uses a DynaVox V AAC system to communicate and participate in the general education curriculum. His teachers and parents have noticed that in addition to improving academically, Carr is happier and more involved in school since he has learned to communicate using his AAC system. To view a video clip of Carr, go to:

<http://www.dynavoxtech.com/success/developmental/details.aspx?id=81>.

## Speech-generating devices

There are many varieties of AAC devices available as communication supports. The availability of “speech” from a device is often very motivating to a student with CCN, and is especially useful for communicating in a group or with partners who are not familiar with other methods of AAC.

These devices typically contain both pre-programmed vocabulary as well as vocabulary important to that particular student (e.g., names of family members, vocabulary needed for school activities, etc.) that has been programmed into the device by an adult who knows the student well. Some devices speak the programmed vocabulary aloud using synthesized speech, while others make use of “digitized” speech or short recordings of human voices.

Pictures, symbols, letters, and words can be represented and organized in many different ways according to the user.

Students also can operate AAC devices in a number of ways. In addition to touching a keyboard or screen, students can use their eyes to control a device with “eye-tracking” technology. They can also use switches to scan pictures, words, and letters on an AAC device or a computer. An occupational therapist can help identify the most effective way in which people with severe physical disabilities can operate AAC technology.





Children who use AAC have needs similar to the needs of other students in the classroom. They require educational programs that are rigorous and relevant and that promote positive relationships.

## Communication Partner Strategies

Communication is a two-way process that depends on both partners. For children with CCN, teachers and paraeducators may play special roles in successful communication. Useful strategies to promote communication include:

<b>Strategy</b>	<b>Rationale</b>	<b>Example(s)</b>
<b>Provide access to AAC</b>	In order to learn effective communication skills, and to participate, children with CCN must have ongoing access to their AAC system.	Whenever a child has an opportunity to communicate, make sure the child has access to AAC, and that appropriate vocabulary is available. See an example at: <a href="http://www.dynavotech.com/success/developmental/details.aspx?id=81">http://www.dynavotech.com/success/developmental/details.aspx?id=81</a>
<b>Develop motivating activities</b>	Children are more likely to communicate and participate when activities are motivating.	Children love books. Shared reading activities are a great time to develop reading and communication skills. See an example at: <a href="http://aacliteracy.psu.edu/StudentSuccess.html#Jackson">http://aacliteracy.psu.edu/StudentSuccess.html#Jackson</a>
<b>Provide many opportunities to communicate</b>	Frequent opportunities help children learn to communicate in diverse settings with a multitude of partners.	Participation in a general education curriculum provides many challenges, but also includes many communication opportunities. See an example at: <a href="http://www.prentrom.com/heroes/joeycerrito">http://www.prentrom.com/heroes/joeycerrito</a>
<b>Wait for a response</b>	Children who use AAC may require more wait time to prepare a response.	Providing an appropriate pace supports student involvement. See an example at: <a href="http://aacliteracy.psu.edu/StudentSuccess.html#Gareth">http://aacliteracy.psu.edu/StudentSuccess.html#Gareth</a>
<b>Respond to communication attempts</b>	Our responses to children's communication attempts help them understand that communication is a powerful tool.	By recognizing and acknowledging all the different ways that a child communicates, partners support the development of new skills. See an example at: <a href="http://aacliteracy.psu.edu/SightWord.html">http://aacliteracy.psu.edu/SightWord.html</a> (scroll to the video).



# Frequently Asked Questions



**I want my student to communicate using speech. Does using AAC discourage the development of speech?**

No, studies have shown that the use of AAC actually improves speech development for children who are able to physically produce speech (Millar, Light, & Schlosser, 2006). In addition, AAC improves language development.

**My student can speak, but she is often difficult for others to understand. Is AAC still an option for her?**

While AAC can be used by children who cannot speak at all, it can be used also by those who do speak but who have difficulty being understood. For example, someone might use an AAC system to clarify something she has tried to convey verbally.

**Does my student need to demonstrate certain skills before he can be a candidate for AAC?**

No, anyone can use AAC. Just as typical children are provided with speech models, children who require AAC need models of AAC to become competent communicators. Children who demonstrate intentional communication may make more rapid progress with an AAC system, but all children who require AAC technology should have access to AAC.

**My student just got a new computer-based AAC system. Should I encourage her to communicate using just this system?**

Students should have access to their AAC systems at all times, but they should be encouraged to use whatever means are appropriate to communicate their messages. This may mean using sign language, gestures, or paper-based systems in addition to more complex systems. Each individual should be encouraged to have a multimodal communication system.

**My student just began using AAC. How many new symbols should I present at once?**

This will vary for each person, but children should have access to more symbols than they will use at any one time. Typically developing children are exposed to language that they might not use right way. It should be the same for children using AAC. They should be provided with the opportunity to use new vocabulary regularly.

## Selected WEB Resources

**AAC Institute:** The AAC institute is a not-for-profit organization dedicated to effective communication for people who rely on augmentative and alternative communication. <http://www.aac institute.org>

**AAC-RERC:** The Augmentative and Alternative Communication Rehabilitation Engineering Research Center functions as a collaborative research group dedicated to the development of effective AAC technology. This Web site includes a variety of research-based information, including handouts of presentations and webcasts. <http://aac-lerc.psu.edu>

**ACOLUG:** The Augmentative Communication On-Line Users' Group is an Internet LISTSERV list that allows users of augmentative communication and their families to communicate with one other and with professionals who are interested in augmentative communication. <http://www.temple.edu/instituteondisabilities/programs/aac/acolug>

**AT/AAC enABLES:** This Web site demonstrates how assistive technology and AAC enable individuals with disabilities to participate in all aspects of life. <http://depts.washington.edu/enables/index.htm>

**Augmentative Communication Inc.:** The ACI is a Web site that supports two newsletters: "Augmentative Communication News" and "Alternatively Speaking." <http://www.augcominc.com/newsletters>

**Early intervention for young children with autism, cerebral palsy, Down syndrome and other disabilities:**

This Web site provides guidelines for early intervention to maximize the language and communication development of young children with special needs. <http://aackids.psu.edu>





























**International Society for Augmentative and Alternative Communication (ISAAC):** ISAAC works to improve the life of every child and adult with CCN. <http://www.isaac-online.org/en/home.shtml>

**Literacy instruction for individuals with autism, cerebral palsy, Down syndrome and other disabilities:**

This Web site provides guidelines for teaching literacy skills to learners with special needs, especially learners with CCN. <http://aacliteracy.psu.edu>



# Selected Connecticut AAC Resources

	Contact	Services
<b>Area Cooperative Education Services (ACES)</b> 350 State Street, North Haven, CT 06473 203-498-6800 • <a href="http://www.aces.org">www.aces.org</a>	<b>Vanessa Taragowski</b> Director of Pupil Services vtaragowski@aces.org • 203-498-6849	   
<b>Capitol Region Education Center (CREC)</b> 111 Charter Oak Avenue, Hartford, CT 06106 860-246-3304 • <a href="http://www.crec.org">www.crec.org</a>	<b>Carolann Cormier, MS, ATP, CCC-SLP</b> ccormier@crec.org • 860-298-9079 <b>Nicole Natale, MS, CCC-SLP</b> nnatale@crec.org • 860-298-9079	  
<b>Connecticut Birth to Three System</b> 460 Capitol Ave., Hartford, CT 06106 860-418-6147 • <a href="http://www.birth23.org">www.birth23.org</a>	<b>Linda Goodman, Director</b> Linda.Goodman@ct.gov 860-418-6147	 
<b>Connecticut Children's Medical Center</b> Connecticut Children's Hospital Speech & Hearing Clinic 282 Washington Street, Hartford, CT 06106 860-545-9000 • <a href="http://www.connecticutchildrens.org">www.connecticutchildrens.org</a>	<b>Barbara E. Brown, Director</b> 860-545-8587 <b>Virginia McGoey-Radshaw, MS, CCC-SLP</b> 860-545-9000	 
<b>Connecticut Tech Act Project</b> 25 Sigourney Street, 11th Floor, Hartford, CT 06106 860-424-4881, (TTY) 860-424-4839 <a href="http://www.cttechact.com">www.cttechact.com</a>	<b>Arlene Lugo, ATP</b> Arlene.Lugo@ct.gov 860-424-4881	 
<b>Cooperative Education Services (CES)</b> 40 Lindeman Drive, Trumbull, CT 06610 203-365-8800 • <a href="http://www.ces.k12.ct.us">www.ces.k12.ct.us</a>	<b>Laura Giovanetti, MS, ATP, CCC-SLP</b> giovanel@ces.k12.ct.us • 203-365-8891	    
<b>EASTCONN</b> 376 Hartford Turnpike, Hampton, CT 06247 860-455-0707 • <a href="http://www.eastconn.org">www.eastconn.org</a>	<b>Carol Magliocco, Ph.D., ATP, PT</b> cmagliocco@eastconn.org • 860-455-0707 <b>Amy Norton, M.Ed., ATP</b> anorton@eastconn.org • 860-455-0707	   
<b>NEAT Marketplace</b> 120 Holcomb Street, Hartford, CT 866-526-4492 or 860-286-3102 <a href="http://www.neatmarketplace.org">www.neatmarketplace.org</a>	<b>Jennifer Baker, MS/P, ATP</b> bakerj@ciboakhill.org • 860-243-2869	  
<b>State Education Resource Center (SERC)</b> 25 Industrial Park Road, Middletown, CT 06457 860-632-1485 • <a href="http://www.ctserc.org">www.ctserc.org</a>	<b>Smita Worah, Ph.D.</b> worah@ctserc.org • 860-632-1485, ext. 319	 
<b>Southern Connecticut State University</b> 501 Crescent Street, New Haven, CT 06515 203-392-5200 • <a href="http://www.southernct.edu">www.southernct.edu</a>	<b>Lisa Barber, MS</b> Barberl1@southernct.edu • 203-392-5954	

## LEGEND



Evaluation/  
Assessment



On-site technical  
assistance/consultation  
for implementation



Training and  
Professional  
Development



Collaboration  
with  
AAC vendors



Recycling  
of  
AAC devices



Low-interest  
loans for purchasing  
AAC devices



Equipment  
lending  
library



Information  
for parents

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