



Autism Focused Intervention
Resources & Modules

Picture Exchange Communication System (PECS) ---EBP Brief Packet---

Components of the EBP Brief Packet...

This evidence-based practice overview on Picture Exchange Communication System (PECS) includes the following components:

1. **Overview:** A quick summary of salient features of the practice, including what it is, who it can be used with, what skills it has been used with, and settings for instruction.
2. **Evidence-base:** The *PECS Evidence-base* details the NPDC criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for this practice.
3. **Step-by-Step Guide:** Use the *PECS Step-by-Step Practice Guide* as an outline for how to plan for, use, and monitor PECS. Each step includes a brief description as a helpful reminder while learning the process.
4. **Implementation Checklist:** Use the *PECS Implementation Checklist* to determine if the practice is being implemented as intended.
5. **Data Collection Sheets:** Use the data collection sheets as a method to collect and analyze data to determine if progress is being made for a learner with ASD.
6. **Tip Sheet for Professionals:** Use the *PECS Tip Sheet for Professionals* as a supplemental resource to help provide basic information about the practice to professionals working with the learner with ASD.
7. **Parent Guide:** Use the *PECS Parent Guide* to help parents or family members understand basic information about the practice being used with their child.
8. **Additional Resources:** Use the *Additional Resources* to learn more about the practice.
9. **CEC Standards:** A list of *CEC Standards* that apply specifically to PECS.
10. **Module References:** A list of numerical *References* utilized for the PECS module.

Suggested citation:

Sam, A., & AFIRM Team. (2015). *Picture exchange communication system*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina. Retrieved from <http://afirm.fpg.unc.edu/picture-exchange-communication-system>

This overview
brief will
support your
use of the
evidence-based
practice: Picture
Exchange
Communication
System.

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information visit:**
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What is Picture Exchange Communication System?

Similar to sign language and picture boards, PECS is an augmentative and alternative communication (AAC) system.⁴ AAC systems are used to help individuals who do not have typical verbal skills to communicate with others. PECS is a behavior based intervention that teaches the learner to use visual-graphic symbols to communicate with others.^{2, 5}

Learners with ASD are taught to give a picture or graphic symbol of a desired item to a communicative partner in exchange for the actual item through a six phase process. Each phase of PECS instruction builds upon the previous phase.

Evidence-base

Based upon the recent review, Picture Exchange Communication System meets the evidence-based practice criteria set by NPDC with 4 single case design studies and 2 group design studies. The practice has been effective for preschoolers (3-5 years) to middle school learners (12-14 years) with ASD. Evidence-based practices (EBP) and studies included in the 2014 EBP report detailed how Picture Exchange Communication System can be used effectively to address: social, communication, and joint attention outcomes.

How is PECS Being Used?

All team members can use the PECS procedures. However, it is recommended that those interested receive professional training. This module is not intended to take the place of training and resources on PECS provided by Pyramid Educational Consultants, Inc. (the developers and marketers of the PECS system). Please visit the website: www.pecsusa.com for information on resources and training. The information presented in this module should be implemented under the supervision of a trained professional.

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---Evidence-base for Picture Exchange Communication System---

The National Professional Development Center on ASD has adopted the following criteria to determine if a practice is evidence-based. The EBP Report provides more information about the review process (Wong et al., 2014).

Efficacy must be established through high quality, peer-reviewed research in scientific journals using:


- randomized or quasi-experimental design studies (two high quality experimental or quasi-experimental group design studies),
- single-subject design studies (three different investigators or research groups must have conducted five high quality single subject design studies), or
- combination of evidence [one high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups (across the group and single subject design studies)].

--OVERVIEW--

Picture Exchange Communication System (PECS) is used to teach learners with ASD with limited functional communication skills to initiate communicative exchanges and interactions within a social context. PECS meets the evidence-based practice criteria with 4 single case design studies and 2 group design studies. The practice has been effective with learners in preschool (3-5 years) to middle school (12-14 years). Studies included in the 2014 EBP report detailed how PECS can be used effectively to address: social, communication, and joint attention outcomes.

In the table below, the outcomes identified by the evidence base are shown by age of participants.

Early Intervention (0-2)	Preschool (3-5)	Elementary (6-11)	Middle (12-14)	High (15-22)
No studies	Social	Social		No studies
	Communication	Communication	Communication	
		Joint Attention		



Picture Exchange Communication System (PECS)

Early intervention (0-2 Years)

No studies

Preschool (3-5 years)

*Carr, D., & Felce, J. (2007). The effects of PECS teaching to Phase III on the communicative interactions between children with autism and their teachers. *Journal of Autism and Developmental Disorders*, 37(4), 724-737. doi: 10.1007/s10803-006-0203-1

Dogoe, M. S., Banda, D. R., & Lock, R. H. (2010). Acquisition and generalization of the picture exchange communication system behaviors across settings, persons, and stimulus classes with three students with autism. *Education and Training in Autism and Development Disabilities*, 45(2), 216-229.

Jurgens, A., Anderson, A., & Moore, D. W. (2009). The effect of teaching PECS to a child with autism on verbal behaviour, play, and social functioning. *Behaviour Change*, 26(1), 66. doi: 10.1375/bech.26.1.66

Elementary (6-11 years)

*Ali, E., MacFarland, S. Z., & Umbreit, J. (2011). Effectiveness of combining tangible symbols with the Picture Exchange Communication System to teach requesting skills to children with multiple disabilities including visual impairment. *Education and Training in Autism and Developmental Disabilities*, 46(3), 425.

Angermeier, K., Schlosser, R. W., Luiselli, J. K., Harrington, C., & Carter, B. (2008). Effects of iconicity on requesting with the Picture Exchange Communication System in children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 2(3), 430-446. doi: 10.1016/j.rasd.2007.09.004

*Carr, D., & Felce, J. (2007). The effects of PECS teaching to Phase III on the communicative interactions between children with autism and their teachers. *Journal of Autism and Developmental Disorders*, 37(4), 724-737. doi: 10.1007/s10803-006-0203-1

Howlin, P., Gordon, R. K., Pasco, G., Wade, A., & Charman, T. (2007). The effectiveness of Picture Exchange Communication System (PECS) training for teachers of children with autism: a pragmatic, group randomised controlled trial. *Journal of Child Psychology and Psychiatry*, 48(5), 473-481. doi: 10.1111/j.1469-7610.2006.01707.x

Middle (12-14 years)

*Ali, E., MacFarland, S. Z., & Umbreit, J. (2011). Effectiveness of combining tangible symbols with the Picture Exchange Communication System to teach requesting skills to children with multiple disabilities including visual impairment. *Education and Training in Autism and Developmental Disabilities*, 46(3), 425.

High (15-22 years)

No studies

* Research which included participants in multiple age ranges.



Picture Exchange Communication System (PECS) ---Step-by-Step Guide---

BEFORE YOU START...

Each of the following points is important to address so that you can be sure the selected EBP is likely to address the learning needs of your student.

Have you found out more information about...?

- Identified the behavior...
- Collected baseline data through direct observation...
- Established a goal or outcome that clearly states when the behavior will occur, what the target skill is, and how the team will know when the skill is mastered...

If the answer to any of these is “no,” review the process of how to select an EBP.

This practice guide outlines how to plan for, use, and monitor the Picture Exchange Communication System practice.

Keep in mind that PECS teacher the learner to use visual-graphic symbols to communicate with others.

Now you are ready to start...

Step 1: PECS Planning

The planning step how to conduct a reinforcer sampling and prepare materials for PECS.

1.1 Receive PECS training from a certified PECS Training

This module is not intended to take the place of training provided by Pyramid Educational Consultants, Inc. For information on training and resources provided, visit the Pyramid Educational Consultants, Inc. website at <http://www.pecsusa.com>.

1.2 Establish performance criteria for program goals

A minimum of two adults are needed to implement PECS. One adult is identified as the “helper” and the other adult as the “communicative partner”.

1.3 Conduct a reinforcer sampling

Reinforcers are needed for using PECS. A reinforcer sampling can be used to identify reinforcers for individual learner.

 *The **PECS Reinforcer Sampling** found in the Resource section will help you identify potential reinforcers to use with the learner.*

1.4 Conduct assessments

Determine the learner’s current communication skills. The information collected through assessments, will help team members determine target skills for PECS training (for example, requesting, initiating interactions) and types of prompts that can be used to facilitate communicative exchanges.

1.5 Prepare communication pictures/symbols and books

No specific pictures or symbols are required for PECS. Select the pictures/symbols that are the easiest to create and use. A designated communication book is needed to store all commonly used pictures/symbols. Plan for creating at least two copies of the communication book for use when the learner begins using PECS across settings and with different communicative partners.

Step 2: Using PECS

This section describes the process of using PECS and each phase of instruction.

2.1 Implement Phase 1: Teaching the physically assisted exchange

The goal of Phase 1 is for the learner with ASD to look at, reach for, pick up, and hand the picture/symbol to the communicative partner. To accomplish this goal, address the following:

- Arrange the training environment by creating opportunities for learning should be available in both a structured and unstructured environment. In a structured training environment, the learner with ASD should be across from the communicative partner, with a helper seated behind or beside the learner to assist in developing the desired actions. To help learners generalize the use of newly acquired skills across settings, activities, and people, PECS training can occur in unstructured environments such as during center time, recess, or lunch.
- Helper physically prompts the learner's communicative exchange with communicative partner. During this stage, no verbal prompts are used with the learner to increase the learner's independence and reduce the learner's reliance upon others during communicative exchanges.
- Reward learner with reinforcer (desired item) once the learner gives the picture/symbol to the communicative partner AND the communicative partner labels the item.
- Gradually reduce the amount of assistance so that few or no prompts are needed for the learner to initiate and complete an exchange by using backward chaining. As the learner becomes more independent during communicative exchanges and less physical assistance from the helper is required, the communicative partner can begin to fade the open-hand prompt.
- The learner meets basic skills of Phase 1 and is ready to move to Phase 2 when the learner is:
 - Reaching for the high-interest item
 - Picking up the picture/symbol of the item,
 - Handing the picture/symbol to the communicative partner
 - Acquiring high interest item

2.2 Implement Phase 2: Expanding spontaneity

The goal of Phase 2 is for the learner with ASD to increase spontaneity and generalization of the picture exchange. To accomplish this goal, address the following:

- Increase the number and variety of reinforcer items to prevent satiation.
- The learner with ASD should exchange pictures/symbols with more communicative partners selected from individuals with whom the learner interacts on a regular basis.
- To increase generalization of the communicative exchange, instruction should occur in a variety of natural environments such as home, school, and community.
- The learner should seek out the communication book in order to request items from a partner. To expand the spontaneity of communicative exchanges, use the following two traveling activities: 1) increase the distance to the communicative partner and 2) increase the distance from the communication book.
- The learner meets skills of Phase 2 and is ready to move to Phase 3 when the learner is:
 - Traveling to communicative partner (distance)
 - Traveling to communication book (distance).

Step 2: Using PECS (continued)

2.3 Implement Phase 3: Simultaneous discrimination of pictures

The goal of Phase 3 is for the learner to attend to the pictures/symbols in order to discriminate between them. To accomplish this goal, address the following:

- When beginning Phase 3, the communication book will only include two pictures/symbols. One picture should be a known, highly reinforcing item or an item appropriate for the situation. The second picture is a non-preferred or unrelated item. It is very important to reinforce the learner's selection of the correct picture as soon as it happens.
- If learners do not learn this skill as quickly, they will need specific instruction. For these learners, use the 4-step error correction procedure.
- Once the learner can discriminate between two pictures/symbols, additional pictures/symbols are introduced to allow for the learner to request from multiple picture/symbol options.
- Use correspondence checks to ensure that the learner is requesting and taking the item for which he or she is asking.
- The learner meets skills of Phase 3 and is ready to move to Phase 4 when the learner is:
 - Independently discriminating between 12 to 20 pictures/symbols
 - Accurately discriminating between 3 or pictures/symbols presented as options
 - Independently traveling to and from communication book to initiate exchange.

2.4 Implement Phase 4: Building sentence structure

The goal of Phase 4 is for the learner to spontaneously make requests using simple sentence structure. To accomplish this goal, address the following:

- Introduce the sentence strip to the learner by placing the "I want" symbol on the left side of sentence strip, Communicative partner guides learner to place the selected picture/symbol next to "I want" symbol on sentence strip. After the learner removes the sentence strip (with assistance if needed) and hands it to the communicative partner, the communicative partner reads the sentence pointing to each symbol/picture. Use backward chaining to fade assistance.
- After the communicative partner reads, "I want," and before naming the requested item, the communicative partner should pause to promote verbalization.
- The learner meets skills of Phase 4 and is ready to move to Phase 5 when the learner is:
 - Placing the "I want" symbol on the strip.
 - Placing picture/symbol on strip
 - Exchanging the strip with communicative partner
 - Pointing to pictures/symbols.

Step 2: Using PECS (continued)

2.5 Implement Phase 5: Responding to “What do you want?”

The goal of Phase 5 is for the learner to increase initiations and for the learner to answer the question, “What do you want?” To accomplish this goal, address the following:

- To begin teaching the learner to respond to the question, “What do you want?” use a 0-second delay. Simultaneously point to the “I want” card and ask the learner “What do you want.”
- As the learner demonstrates ability to complete the sentence strip and the exchange, increase the interval of the delay. The communicative partner should encourage the learner to complete the exchange prior to the point prompt.
- The learner meets skills of Phase 5 and is ready to move to Phase 6 when the learner is:
 - Responding and requesting without prompts
 - Beating the prompt for the delay interval used.

2.6 Implement Phase 6: Commenting in response to a question

The goal of Phase 6 is for the learner to use labeling and naming. To accomplish this goal, address the following:

- Add a new symbol to represent the concept of “I see” to the communication book.
- Introduce commenting in response to the question, “What do you see?” by holding up a selected item and asking the question. The communicative partner physically assists learner in picking up “I see” symbol and placing it on the sentence strip. The communicative partner waits 5 seconds. If learner places the picture/symbol on sentence strip and gives it to communicative partner, provide praise and a reinforcer (not item being held by communicative partner. If the learner does not, the communicative partner should provide physical assistance. Gradually add pictures/symbols and items for the learner to discriminate among.
- To teach differentiated responses, add the question “What do you want?” Then add other questions such as “What do you hear?” or “What do you have?”
- To encourage a learner to comment without being questioned first, create interesting environmental events and fade questions.
- The learner has acquired the needed skills for Phase 6 when the learner is:
 - Making spontaneous requests
 - Making spontaneous comments.

Step 3: Monitoring PECS

The following process describes how the use of PECS can be monitored and how to adjust your plan based on the data.

3.1 Collect data on target behavior/skills

By collecting data on target behaviors and skills, team members are able to determine if the learner is making progress. To purchase these resources, visit the Pyramid Educational Consultants™ website at <http://www.pecsusa.com>.

3.2 Determine next steps based on learner progress

Collecting data will help team members determine if the learner is ready to move to the next phase of PECS. If the learner is making progress based upon data collected, team members should continue to use PECS.

If the learner with ASD is not showing progress, ask yourself the following questions:

- Do the preferred items need to be changed?
- Do additional preferred items need to be added?
- Are selected reinforcing items motivating to the learner?
- Is the correct level of prompting or physical assistance being used?
- Does the learner need to address skills acquired in a previous Phase?
- Is PECS being used with fidelity? (Use the PECS Implementation Checklist to determine fidelity.)
- Has a team member been trained to use PECS? (See Pyramid Educational Consultants™ website for training opportunities at <http://www.pecsusa.com>.)

If these issues have been addressed and the learner with ASD continues not to show progress, consider selecting a different evidence-based practice to use with the learner with ASD.

Picture Exchange Communication System (PECS) ---Implementation Checklist---

Before you start:

Have you...

- Identified the behavior?
- Collected baseline data through direct observation?
- Established a goal or outcome that clearly states **when** the behavior will occur, **what** the target skill is, and **how** the team will know when the skill is mastered.

If the answer to any of these is "no", refer to the "Selecting EBPs" section on the website.

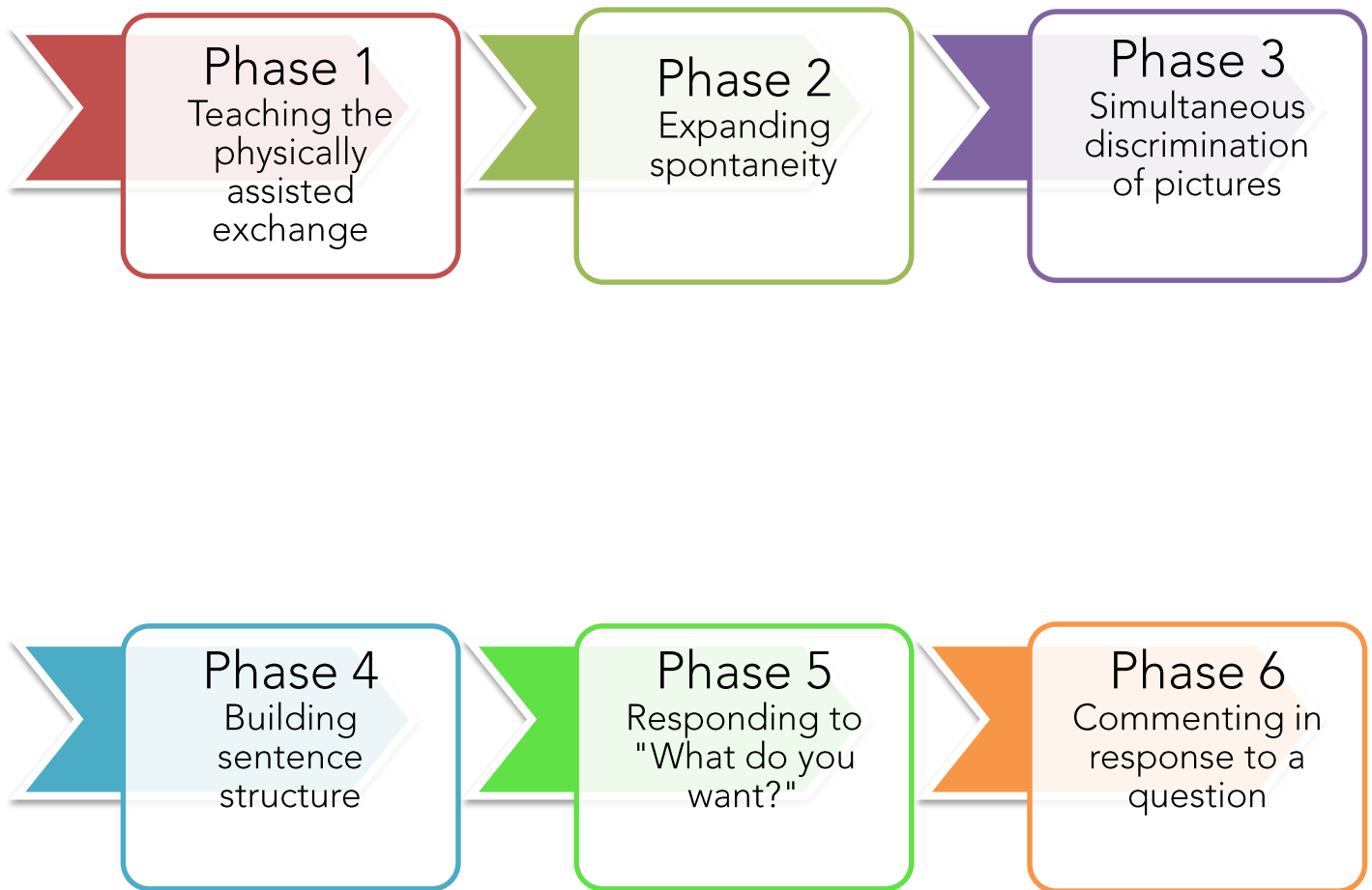
	Observation Date	1	2	3	4
	Observer's Initials				
Step 1: Planning					
1.1	Receive PECS training from a certified PECS trainer				
1.2	Identify adults who will participate in PECS and train as needed				
1.3	Conduct a reinforcer sampling				
1.4	Conduct assessments				
1.5	Prepare communication pictures/symbols and books				
Step 2: Using					
2.1 Implement Phase 1: Teaching the physically assisted exchange					
	<input type="checkbox"/> Arrange the training environment				
	<input type="checkbox"/> Helper physically prompts the learner's communicative exchange with communicative partner				
	<input type="checkbox"/> Reward learner with reinforcer				
	<input type="checkbox"/> Thin physical assistance and open-hand prompt				
	<input type="checkbox"/> Determine if learner meets basic skills of Phase 1 to move to Phase 2				
2.2 Implement Phase 2: Expanding spontaneity					
	<input type="checkbox"/> Increase number and variety of reinforcers				
	<input type="checkbox"/> Increase number of communicative partners				
	<input type="checkbox"/> Conduct training in a variety of environments				
	<input type="checkbox"/> Encourage learner to seek communication book through traveling activities				
	<input type="checkbox"/> Determine if learner meets skills of Phase 2 to move to Phase 3				
2.3 Implement Phase 3: Simultaneous discrimination of pictures					
	<input type="checkbox"/> Reinforce selection of correct picture to teach discrimination between two pictures				
	<input type="checkbox"/> Teach discrimination through correction procedure				
	<input type="checkbox"/> Increase number of pictures in display				
	<input type="checkbox"/> Conduct correspondence checks				
	<input type="checkbox"/> Determine if learner meets skills of Phase 3 to move to Phase 4				
2.4 Implement Phase 4: Building sentence structure					
	<input type="checkbox"/> Introduce sentence structure to learner				
	<input type="checkbox"/> Promote verbalization				
	<input type="checkbox"/> Determine if learner meets skills of Phase 4 to move to Phase 5				
2.5 Implement Phase 5: Responding to "What do you want?"					
	<input type="checkbox"/> Introduce the question, "what do you want?" using a zero-second delay				
	<input type="checkbox"/> Increase delay interval for the point prompt				
	<input type="checkbox"/> Determine if learner meets skills of Phase 5 to move to Phase 6				
2.6 Implement Phase 6: Commenting in response to a question					
	<input type="checkbox"/> Prepare needed materials				
	<input type="checkbox"/> Introduce commenting in response to a question				
	<input type="checkbox"/> Teach differentiated responses to questions				
	<input type="checkbox"/> Teach spontaneous commenting				
	<input type="checkbox"/> Determine if learner meets skills of Phase 6				
Step 3: Monitoring					
3.1	Collect data on target behaviors/skills				
3.2	Determine next steps based on learner progress				



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---PECS Phase Guide---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.



For more information visit:

www.afirm.fpg.unc.edu (AFIRM Modules)

www.pecsusa.com (PECS Training & Resources)



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---PECS Data Collection---

By collecting data on target behaviors and skills, team members are able to determine if the learner is making progress. Data collection needed for each Phase of PECS is described in the table below.

PECS Data Collection:

Phase	Collect Data On:
Phase 1: Teaching the physically assisted exchange	<ul style="list-style-type: none"> Record skills used during the communicative exchange (i.e., picking up, reaching, releasing) Record types of prompts needed to complete communicative exchange (e.g., full physical, partial)
Phase 2: Expanding spontaneity	<ul style="list-style-type: none"> Record if the learner traveled to communicative partner Record distance learner traveled to communicative partner Record if the learner traveled to communication book Record distance learner traveled to communication book Record items requested (at least four different items)
Phase 3: Simultaneous discrimination of pictures	<ul style="list-style-type: none"> Record number of pictures the learner can independently discriminate (between 12 to 20) Record number of pictures the learner can accurately discriminate among (between 3 to 4) Record distance learner traveled to communication book
Phase 4: Building sentence structure	<ul style="list-style-type: none"> Record if learner places "I want" on sentence strip Record if learner places picture/symbol on sentence strip Record exchanges of sentence strip with communicative partner Record if learner points to pictures/symbols
Phase 5: Responding to such as 'What do you want?'	<ul style="list-style-type: none"> Record delay interval used Record if learner answers question Record if learner beat prompt
Phase 6: Commenting in response to a question	<ul style="list-style-type: none"> Record if learner responds to question "What do you see?" Record if learner responds to question "What do you want?" Record if learner makes a spontaneous request Record if learner makes a spontaneous comment

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---PECS Phase 1 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 1: Teaching the physically assisted exchange

- 1. The learner reaches toward desired item as identified by reinforcer sampling. Helper interrupts reach and redirects the learner to pick up the picture/symbol.
- 2. Once the learner has the picture/symbol in hand, the helper assists the learner by placing the picture in the open hand of the communicative partner.
- 3. Communicative partner immediately hands the item to the learner and names the item.
- 4. No verbal prompts are given through the learning process in Phase 1.
- 5. Once the exchange steps are established with the learner, physical assistance from the helper is faded.
- 6. After physical assistance from the helper is faded during the exchange, the communicative partner fades use of open-hand prompt.

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---PECS Phase 2 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 2: Expanding spontaneity

- 1. The learner picks up picture/symbol without prompting. As training progresses, the learner must move some distance to access picture/symbol from the communication book.
- 2. When the learner has a picture/symbol in hand, the learner moves some distance to give it to communicative partner.
- 3. Communicative partner hands the item to the learner and names the item.
- 4. No verbal prompts are given throughout Phase 2.
- 5. The exchange is immediately rewarded with the requested item being given to the learner.

For more information visit:

www.afirm.fpg.unc.edu (AFIRM Modules)
www.pecsusa.com (PECS Training & Resources)



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---PECS Phase 3 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 3: Simultaneous discrimination of pictures

- 1. Communicative partner provides two pictures/symbols (one preferred and one non-preferred). The learner must move to and pick up the preferred picture/symbol.
- 2. Communicative partner interacts with both items to entice learner.
- 3. The learner must pick up picture/symbol and move some distance to the communicative partner.
- 4. As soon as the learner touches correct picture, communicative partner provides social reinforcement.
- 5. Upon receiving the picture/symbol, communicative partner immediately hands the item to the learner and names the item.
- 6. Provide a variety of distracter items and target pictures/symbols.
- 7. Do not provide verbal prompts.
- 8. Move pictures around on communication book (e.g. diagonal, vertical, horizontal).
- 9. Use discrimination correction procedure when appropriate.

For more information visit:

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www.pecsusa.com (PECS Training & Resources)



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---PECS Phase 4 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 4: Building sentence structure

- 1. Communicative partner places "I want" symbol on the left side of sentence strip.
- 2. Learner takes pictures/symbol from communication board and the communicative partner guides learner to place the picture/symbol next to "I want" on the sentence strip.
- 3. Communicative partner guides the learner to take sentence strip and hand it to the communicative partner.
- 4. Communicative partner points to pictures/symbols as the partner reads the sentence strip and gives the requested item to the learner.
- 5. Communicative partner prompts learner to replace sentence strip in the communication book.
- 6. On repeated trials, fade physical guidance until learner is able to place the picture/symbol next to "I want".
- 7. After the exchange, the communicative partner guides the learner to place the "I want" symbol on the sentence strip before placing the picture/symbol of the requested item.
- 8. On repeated trials, fade physical guidance for placing the "I want" symbol.
- 9. The learner points to the symbols/pictures as the communicative partner reads the sentence strip. To promote verbalization, the communicative partner pauses after saying, "I want" and before identifying the picture/item providing an opportunity for the learner to say the name of requested item.
- 10. If learner verbalizes at all during the pause, the communicative partner provides the requested item immediately and provides verbal praise for vocalization.

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---PECS Phase 5 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 5: Responding to questions, such as "What do you want?"

- 1. Simultaneously, the communicative partner points to the "I want" card and asks, "What do you want?"
- 2. The communicative partner adds an increasing delay between the point and the verbal cue, "What do you want?"
- 3. Communicative partner fades the point prompt as learner demonstrates ability to beat the verbal prompt.
- 4. Communicative partner provides many opportunities for the learner to answer the question, "What do you want?" and opportunities for the learner to initiate requests without prompting.

For more information visit:

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www.pecsusa.com (PECS Training & Resources)



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---PECS Phase 6 Checklist---

The Picture Exchange Communication System (PECS) is used to teach learners with limited functional communication skills to initiate communicative exchanges and interactions within a social context in six phases.

Phase 6: Commenting in response to a question

- 1. Prepare materials (items learner can request, pictures/symbols of the items, and new picture/symbol for "I see").
- 2. Place the "I see" symbol and picture/symbol of item near sentence strip.
- 3. Communicative partner holds an item and asks, "What do you see?", then points at the "I see" symbol.
- 4. Communicative partner guides learner to pick up the "I see" symbol and place it on the sentence strip, if learner does not do so independently.
- 5. Communicative partner waits 5 seconds to see if learner picks up and places picture of item on the sentence strip.
- 6. If learner successfully places picture of item on sentence strip, communicative partner says, "Yes, you see a ____."
- 7. If learner does not successfully place picture of item on sentence strip, communicative partner guides learner to do so and says, "You see a ____."
- 8. Communicative partner provides verbal praise or other tangible reinforcement but does not provide learner with corresponding item.
- 9. Communicative partner fades cues as learner is able to use the "I see" symbol to respond to "What do you see?"
- 10. Increase number of pictures and items the learner has to discriminate among to answer the question, "What do you see?"
- 11. As the learner is able to reliably respond to "What do you see?", place the "I see" symbol below the "I want" symbol in the upper-left corner of the communication book.
- 12. Communicative partner intermixes "What do you see?" with "What do you want?"
- 13. Communicative partner provides requested item when learner requests appropriately.
- 14. Communicative partner responds with a verbal praise or alternative reinforcement, upon learner correctly labeling or commenting.
- 15. Promote spontaneous commenting by fading questioning.

For more information visit:

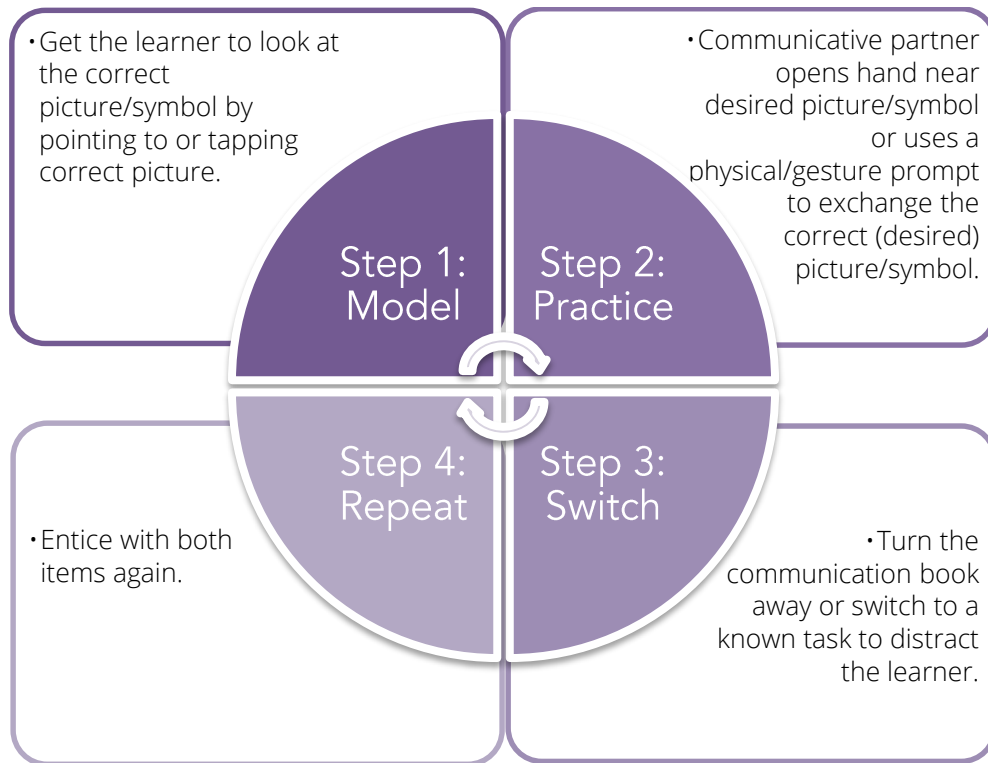
www.afirm.fpg.unc.edu (AFIRM Modules)
www.pecsusa.com (PECS Training & Resources)



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---PECS 4-Step Error Correction---

Other learners do not learn this skill as quickly and will need specific instruction. For these learners, use the 4-step error correction procedure.



To increase the contrast between the picture/symbol being taught and other picture/symbols consider the following strategies:

- Enlarge picture/symbol of the relevant object to be larger than the picture/symbol of the non-preferred picture/symbol
- Use color picture/symbol of relevant objects to contrast black-and-white pictures of non-preferred/irrelevant object
- Highlight the picture/symbol of relevant object with a magic marker
- Use a blank card as the other picture in the display
- Make the picture/symbol of the relevant object 3-dimensional by attaching it to a block
- Place the picture/symbol of relevant object closer to where you are holding the desired object.

For more information visit:

www.afirm.fpg.unc.edu (AFIRM Modules)
www.pecsusa.com (PECS Training & Resources)



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---PECS Reinforcer Sampling---

Learner's Name: _____ Date/Time: _____

Observer(s): _____

Reinforcers are needed for using PECS. A reinforcer sampling can be used to help you identify reinforcers for individual learner. Follow the steps below to conduct a reinforcer sampling.

Conduct a Reinforcer Sampling

1. Sit in front of the learner and hold up two items. Ask the learner to "Pick one."
2. Wait 10 seconds for the learner to indicate selection in manner that is appropriate for the learner (e.g. verbalization, pointing, using an augmentative communication device).
3. Place the selected object in a container for learner's selection and non-selected item in the not selected container.
4. Repeat steps 1 through 3 until half of the objects presented are selected.

Item 1	Selection	Item 2	Selection
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No

List the Reinforcers that the learner with ASD selected:

For more information visit:

www.afirm.fpg.unc.edu (AFIRM Modules)
www.pecsusa.com (PECS Training & Resources)

Picture Exchange Communication System (PECS) ---Tip Sheet for Professionals---

Picture Exchange Communication System PECS

Picture Exchange Communication System...

- is an evidence-based practice for children and youth with autism spectrum disorder (ASD) from 3 to 14 years of age.
- is a behaviorally based intervention that teaches the learner to use pictures/symbols to communicate with others.

Why Use?

- Some learners with ASD might not develop typical verbal and nonverbal communication skills.
- PECS can be used to develop a system of communication and promote speech development.
- PECS can be used to teach learner's with limited functional communication skills to initiate communicative exchanges and interactions within a social context.

Outcomes

- The evidence-base for PECS supports the use of this practice to address the outcomes below:

Early Intervention (0-2)	Preschool (3-5)	Elementary (6-11)	Middle (12-14)	High (15-22)
No studies	Social	Social		No studies
	Communication	Communication	Communication	
		Joint Attention		



TIPS:

- Receive training from a certified PECS training before using PECS. For more information on training and resources provided, visit the Pyramid Educational Consultants, Inc. website at <http://www.pecsusa.com>.
- Determine possible reinforcers for the learner by talking with family and team members and conducting a reinforcer sampling with the learner.
- Select pictures or symbols that are easy to create and use. Create a PDF file of pictures that can be easily accessed to quickly print replacement pictures/symbols when needed.



Picture Exchange Communication System PECS

This tip sheet was designed as a supplemental resource to help provide basic information about the practice.

For more information visit:
www.afirm.fpg.unc.edu



Picture Exchange Communication System (PECS) ---Tip Sheet for Professionals---

STEPS FOR IMPLEMENTING

1. Plan

- Receive PECS training from a certified PECS trainer
- Identify adults who will participate in PECS and train as needed
- Conduct a reinforcer sampling
- Conduct assessments
- Prepare communication pictures/symbols and books

2. Use

- 2.1 Implement Phase 1: Teaching the physically assisted exchange
 - Arrange the training environment
 - Helper physically prompts the learner's communicative exchange with communicative partner
 - Reward learner with reinforcer
 - Thin physical assistance and open-hand prompt
 - Determine if learner meets basic skills of Phase 1 to move to Phase 2
- 2.2 Implement Phase 2: Expanding spontaneity
 - Increase number and variety of reinforcers
 - Increase number of communicative partners
 - Conduct training in a variety of environments
 - Encourage learner to seek communication book through traveling activities
 - Determine if learner meets skills of Phase 2 to move to Phase 3
- 2.3 Implement Phase 3: Simultaneous discrimination of pictures
 - Reinforce selection of correct picture to teach discrimination between two pictures
 - Teach discrimination through correction procedure
 - Increase number of pictures in display
 - Conduct correspondence checks
 - Determine if learner meets skills of Phase 3 to move to Phase 4
- 2.4 Implement Phase 4: Building sentence structure
 - Introduce sentence structure to learner
 - Promote verbalization
 - Determine if learner meets skills of Phase 4 to move to Phase 5
- 2.5 Implement Phase 5: Responding to "What do you want?"
 - Introduce the question, "what do you want?" using a zero-second delay
 - Increase delay interval for the point prompt
 - Determine if learner meets skills of Phase 5 to move to Phase 6
- 2.6 Implement Phase 6: Commenting in response to a question
 - Prepare needed materials
 - Introduce commenting in response to a question
 - Teach differentiated responses to questions
 - Teach spontaneous commenting
 - Determine if learner meets skills of Phase 6

3. Monitor

- Collect data on target behaviors
- Determine next steps based on learner progress



Picture Exchange Communication System (PECS) ---Parent's Guide---

This introduction provides basic information about picture exchange communication system.

What is PECS?

- PECS is an evidence-based practice for preschool to middle school aged (3-14 years) children with autism spectrum disorder (ASD) from 3 to 14 years old.
- PECS helps learners with ASD develop a system of communication and promotes speech development and production.

Why use PECS with my child?

- Many learners with ASD struggle with communication. PECS can be used to teach children how to initiate communicative exchanges and interactions.
- PECS teaches learners to use symbols or pictures to communicate with others.
- Research studies have shown that PECS has been used effectively with learners in preschool, elementary school, and middle school to address social, communication, and joint attention outcomes.

What activities can I do at home?

- Create a list of your child's favorite toys and activities. Share this list with your child's IEP team.
- Ask your child's team for a communication book to use at home with appropriate symbols/pictures to use at home.
- Work with your child's team to use PECS at home or in the community. By encouraging use at home, your child will be more likely to generalize use of PECS across both the home and school setting.

This parent introduction to PECS was designed as a supplemental resource to help answer basic questions about this practice.

To find out more about how PECS is used with your child, speak with:

For more information visit:
www.afirm.fpg.unc.edu



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Check out
these
resources to
support your
use of PECS.

For more
information visit:
www.afirm.fpg.unc.edu

---Additional Resources---

Training Opportunities:

Pyramid Educational Consultants, Inc. (n. d.). Welcome. Retrieved on January 19, 2016 from: www.pecs.com

Articles:

Ganz, J. B., Rispoli, M. J., Mason, R. A., & Hong, E. R. (2013). Moderation of effects of AAC based on setting and types of aided AAC on outcome variables: An aggregate study of single-case research with individuals with ASD. *Developmental Neurorehabilitation*, 17(3), 184-192. doi: 10.3109/17518423.2012.748097

Tien, K. (2008). Effectiveness of the Picture Exchange Communication System as a functional communication for individuals with autism spectrum disorders: A practice-based research synthesis. *Education and Training in Developmental Disabilities*, 43(1), 61-76.

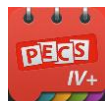
Apps:



iHear PECS: Animals™ by Pyramid Educational Consultants, Inc (\$1.99)



PECS Phase III by Pyramid Educational Consultants, Inc (\$7.99)



PECS® IV+ by Pyramid Educational Consultants, Inc (\$99.99)



Wait4it™ by Pyramid Educational Consultants, Inc (\$1.99)

Books:

- Bondy, A. (2011). Pyramid approach to education: A guide to functional ABA, 2nd ed. Pyramid Educational Consultant.
- Bondy, A., & Frost, L. (2011). A picture's worth: PECS and other visual communication strategies in autism, 2nd edition. Woodbine House.

Picture Cards:

- Do2Learn™. (2016). Printable Picture Cards. Retrieved on February 3rd, 2016 from: <http://www.do2learn.com/picturecards/printcards/>
- Mayer Johnson Co. (2015). Boardmaker ® v.6. Retrieved on February 3rd, 2016 from: <http://www.mayer-johnson.com/boardmaker-v-6/>
- National Autism Resources. (2015). Picture Cards and Software to Support Communication. Retrieved on February 3rd, 2016 from: <http://www.nationalautismresources.com/pecs-autism.html>
- Pyramid Educational Consultants, Inc. (n. d.). PECS 151. Retrieved on February 3rd, 2016 from: <http://www.pecsusa.com/store/pecs-151>

Websites:

- Indiana Resource Center for Autism (2016). What is the Picture Exchange Communication System or PECS? Retrieved on January 19, 2016 from: <http://www.iidc.indiana.edu/pages/What-is-the-Picture-Exchange-Communication-System-or-PECS>
- National Autism Resources. (2015). The Picture Exchange Communication System (PECS). Retrieved on January 19, 2016 from: <http://www.nationalautismresources.com/picture-exchange-communication-system.html>
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Picture Exchange Communication System CEC Standards

The CEC Standards that apply to all 27 evidence-based practices can be found on our website at: <http://afirm.fpg.unc.edu/learn-afirm>

Below are CEC Standards that apply specifically to Picture Exchange Communication System (PECS) module.

Standard	Description
Initial Preparation Standard 1: Learner Development and Individual Learning Differences¹	
DDA1.K5	Speech, language, and communication of individuals with developmental disabilities/autism spectrum disorders
Initial Preparation Standard 2: Learning Environments	
ISCI 2 K5	Social skills needed for educational and other environments
DDA2.S3	Use specialized instruction to enhance social participation across environments
Initial Preparation Standard 5: Instructional Planning & Strategies	
ISCI 5 K3	Augmentative and assistive communication strategies
ISCI 5 S9	Prepare and organize materials to implement daily lesson plans
ISCI 5 S19	Use strategies to support and enhance communication skills of individuals with exceptionalities
DDA5.S2	Implement instructional programs that promote effective communication skills using verbal and augmentative/alternative communication systems for individuals with developmental disabilities/autism spectrum disorders
DDA5.S3	Provide specialized instruction for spoken language, reading and writing for individuals with developmental disabilities/autism spectrum disorders

Standard	Description
Advanced Preparation Standard 3: Programs, Services, and Outcomes	
SEDAS3.K3	Modify the verbal and non-verbal communication and instructional behavior in accord with the needs of individuals with developmental disabilities/autism spectrum disorder
SEDAS3.S7	Design and implement instruction that promote effective communication and social skills for individuals with developmental disabilities/autism spectrum disorders

¹ The knowledge described in this Standard is applied to skills in other Standards.

For more
information visit:
www.afirm.fpg.unc.edu

---Module References---

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2. Bondy, A., & Frost, L. (1994). The Picture Exchange Communication System. *Focus on Autism and Other Developmental Disabilities*, 9(1), 2-19. doi: [10.1177/108835769400900301](https://doi.org/10.1177/108835769400900301)
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10. Ali, E., MacFarland, S. Z., & Umbreit, J. (2011). Effectiveness of combining tangible symbols with the Picture Exchange Communication System to teach requesting skills to children with multiple disabilities including visual impairment. *Education and Training in Autism and Developmental Disabilities, 46*(3), 425-435.
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12. Greenberg, A. L., Tomaino, M. A. E., & Charlop, M. H. (2014). Adapting the Picture Exchange Communication System to elicit vocalizations in children with autism. *Journal of Developmental and Physical Disabilities, 26*, 35-51. doi: 10.1007/s10882-013-9344-2
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