Children who struggle with communication...

Children with developmental disabilities who have trouble communicating can end up living in isolated and limited interactive environments. They may only be “engaged in boring, non-preferred tasks and forced to adhere to rigidly structured schedules over which they have no control or choice on a daily basis. It is critical to provide these children with opportunities for communication and control in the context of meaningful, interactive activities and environments” (Beukelman & Mirenda, 2005).

The link: behavior & communication difficulties...

Often times you will see children with developmental disabilities with problem behaviors such as tantrums, hitting, screaming, pushing, self-injurious behavior etc. When children have no other ways of letting others know what they need/want or even just limit ways of communicating with others they can become frustrated resulting in these problem behaviors.

Children with developmental disabilities may also become anxious and frustrated when they do not understand what will happen next or understand what is expected of them, which can also lead to these problem behaviors (Beukelman & Mirenda, 2005).

How can we help?

By creating communication systems we can help give these children a way to express themselves in meaningful and socially appropriate ways as well as provide them with supports to help them improve their understanding of their environment.

In the following document you will find specific information on different low-tech communication systems as well as information on what you should take into consideration when creating these types of communication systems.
“Low-tech systems require both the child and the person in which the child is trying to communicate with to be actively involved in the interaction.”
- Scott, 1998

What is a low-tech system?

Low-tech systems are simply described by Scott (1994) as any way to communicate “that doesn’t involve electricity or electronics”. Low-tech systems can simply consist of paper and pencil, but it does not mean that they are inferior to systems that are referred to as high-tech systems. Low-tech systems do not need batteries, need to be charged or become broken when they are dropped. These types of systems “can offer the child a quick, powerful and highly flexible” way to communicate (Scott, 1994).

Things to take into consideration...

When creating low-tech systems like the ones you will learn about later on in the information package there are many things to take into consideration.

What to use?

Augmentative alternative communication uses things (symbols) such as objects, pictures, photographs, or letters/words to represent the message the child wishes to express to someone. So what one do you use? What you choose to use highly depends on the child.

- **Objects of reference:** Some children have difficulty understanding that a picture can refer to an object or activity therefore, real objects or parts of objects (otherwise know as objects of reference) have to be used (Scott, 1998). This could be due to cognitive abilities or if a child has not been exposed to pictures or photographs throughout their life they may have a hard time as well. For more information and examples on selecting objects to use, see appendix A (Setting Up an Object Symbol System).

  - Object of referents are helpful for children who have memory difficulties, are visually impaired or have severe learning difficulties or multiple disabilities. Objects of reference require skills that rely on perceptual rather than cognitive abilities, recognition rather than recall memory thus placing fewer demands on the child (Scott, 1998).

  - Objects of reference may also be used initially with children to act as a transition to help the child understand that things can represent other objects, activities etc. Real objects are apart of children’s everyday lives and are therefore a lot easier for children to understand what those objects can mean within their lives (Scott, 1998).

Continued on next page...
Things to take into consideration...

What to use? (Continued...)

- **Photographs/Pictures:** Photographs of objects are the next step up from real objects. Photographs can be taken of the actual real life objects that the child is use to seeing in their everyday lives. Therefore, it makes it easier for the child to recognize what the picture represents compared to a picture that may be printed off of the computer or a picture symbol that is available commercially. For example, a photograph may be taken of a chair that he/she sits in everyday rather than a random picture of a chair printed off the computer.

  o Photographs are helpful for children who have memory difficulties, causing the children to rely on recognition rather than recall memory thus placing fewer demands on the child (Scott, 1998).

  o Photographs may also be used initially with children to act as a transition to help the child understand that a picture can represent real life objects or activities.

  There are many commercially available picture symbols that are widely used. Picture symbols

- **Letters/Words:** Letters and words are only used for children who can read and write. The use of letters or words allows the child to spell out his/her own messages without relying on the symbol being present.

- **Combining symbol types:** Often times you may combine these symbol types in order to help the child make transitions between the use of symbol types. It is also a good idea to place the word above the object/photograph/picture to help the child develop literacy skills as well as to ensure that different adults interpret the use of the object/picture/photograph in the same way.

* It is important to figure out what symbols work best for the child. If you start with picture symbols and it does not seem to be working then you may want to try photographs if the photographs are not working then you may want to try real objects. However, it is important to remember that it takes time for a child to learn the meaning of the symbols being used. It is important to continuously expose the individual to the symbols in order for them to start to make the associations. Before giving up on one type of symbol, make sure you have given the child adequate exposure to the symbol type you began with.

* Visual acuity and visual-perceptual problems will affect decisions regarding the size of the pictures/photographs/words → it is important to know the status of the individuals vision (Beukelman & Mirenda, 2005).
Things to take into consideration...

How will the child pick/show what symbol they want to use?

The child you are working with may simply be able to point to or hand you the symbol that he/she wants. “However, pointing may not be possible for a person with more severe physical limitations. There are many different techniques for accessing, or selecting, a symbol from a low-tech communication display” (Scott, 1998).

- **Direct selection**: The child selects the symbol.
  - Pointing to, or touching, the required symbol on a display is a common method and this may be achieved most commonly by finger or fist pointing, however other parts of the body can also be used e.g. elbows, toes, feet (Scott, 1998).
  - A technique of ‘eye pointing’ can also be used, where the person directs their eye gaze at the desired object or symbol on the display (Scott, 1998).
  - Light pointers (perhaps worn on a sweat band around their head), head and mouth sticks or hand-held pointers may also be used with individuals who have mobility issues (Scott, 1998).

- **Partner assisted scanning**: The child depends on the communication partner for successful communication of their wants/needs, opinions etc. This type of method is used for children who have severe mobility issues or severe visual impairments.
  - “The communication partner says and shows, one by one or group by group, the symbols presented in the communication book or on the communication board, and the child indicates that the desired group, or object has been reached by performing a pre-determined action, for example; eye blinking twice can mean no while eye blinking one can mean yes, or vocalizing” (Scott, 1998).
In this section you will learn about low-tech systems that help children with developmental disabilities to understand their environment.
Understanding the environment: Choice Boards

Purpose:

The primary purpose of a choice board is to provide a visual display of options. It is a strategy that will help the child understand the spoken message (Beukelman & Mirenda, 2005).

For many children with developmental disabilities simply telling them their choices is not enough. Often times it is difficult for them to remember all of the choices or it may be difficult for them to understand. With the use of a visual display the child can see all of the choices before they need to make a decision (Beukelman & Mirenda, 2005).

Although the choice board allows the child to express their own choice, a choice board’s main purpose is not for the child to express him/herself. A choice board’s purpose is to help provide structure, and help the child understand what is expected of them while giving them a little more control of their environment (Vicker, 1999; iCAN, 2000).

Giving children choices allows them to have some control over certain situations, which helps to reduce frustration and anxiety and in return helps to reduce problem behaviors (Beukelman & Mirenda, 2005).

- Providing choices: offers independence, can increase motivation to the activity/task, can increase attention to the activity/task, can help to prevent learned helplessness and can reduce problem behaviors (iCAN, 2000).

Who may benefit?

- Children who have: problem behaviors, difficulty staying on task, lack of motivation during activities.

- Choice boards have been widely used for children with autism.

Where to begin?

When you first introduce the choice board to the child he/she may or may not understand what the choice board is for or understand how it works. If the child has trouble they will need help understanding the concept and therefore need to be taught to make choices using the choice board (Beukelman & Mirenda, 2005).

- Beginning with two choices and slowly increasing the number of choices will help the child learn to look at each option.

Continued on next page...
Choice Boards continued...

- To help the child with choice making when you begin with only two choices you can start with: - two preferred items - one preferred item and one non-preferred item - one preferred item and a nothing item (blank card). Each child is different therefore if one way does not work try the other two.

- Start by asking the child what they want while showing them the choice board. You may need to help the child make a choice so that the child learns what you point to/reach for/look at, you get.

Remember it is important to provide the child with choices throughout their day to help them feel more in control of their environment. Even for individuals who may not be able to choose what activity they do next, think of opportunities within the activity that the child may have choice. For example, who they would like to sit next to during the activity, or what food they would like to eat first during lunchtime (Beukelman & Mirenda, 2005).

Specific adaptations:

- **Spacing:** placing the choices closer or further apart

- **Alignment:** organize the choices vertically or horizontally

- **Selecting the choices:** If the child has a physical impairment you need to think about how they will select their choices. Refer to page 4 to see suggestions for alternative ways for the child to make their selection.

- **Symbols:** If the child is using objects as reference then you can simply create a choice board using objects instead of pictures.

- **Durability:** If laminate is available it can be used to cover the base-board and the picture symbols to make them more durable.

- **Adaptability:** Velcro can be used on the base-board etc. and on the backs of the objects/picture/photograph symbols to keep the objects/pictures/photographs on the base-board in the proper place.
Understanding the environment:

Visual Schedules

Purpose:

The primary purpose of a visual schedule is to give the child a visual outline of what his/her day/specific time of day may look like (Beukelman & Mirenda, 2005).

The visual schedule may act as a way:

- To introduce the individual to the idea that one thing can stand for another
- To provide an overview of the sequence of activities throughout the day
- To provide specific information about what will happen next in the day
- To ease transitions from one activity to the next
- To improve ability to adapt to change
- To help build memory skills

When a child can see or feel an object associated with the next activity it helps build anticipation and preparation for the activity (PISP, 2000). A visual schedule provides structure and predictability allowing the child to know what will happen and in what order. This can help reduce problem behaviors.

Using a visual schedule also helps to target essential skill areas such as organization, attending, self-help, following directions, following rules and modifying behavior.

A visual schedule can become a useful tool for letting the child know when a daily routine may change.

Who may benefit?

Children who have: problems with transitions, individuals with a high need for predictability, individuals with anxiety.

Visual schedules have been widely used and researched with children with autism.

Where to begin?

* A visual system like every other low-tech system needs to be tailored to the child. Please refer to page 2, 3 and 4 (Things to consider) as well as page 10 (specific adaptations) to find more information on how to tailor visual schedules.

- First start by making a list of activities that the child will be involved in throughout his or her daily routine (PISP, 2000). You could make a visual schedule for the whole day or for only specific parts of the day (see next page for examples).

Continued on next page...
Visual schedules continued...

Where to begin? (Continued…)

For example:

- **Morning routine schedules:**
  - Make your bed
  - Get dressed
  - Eat breakfast
  - Pack your lunch and snacks
  - Get your backpack

- **School activity schedules:**
  - National Anthem
  - Desk time
  - Computer
  - Calendar time
  - Desk time

- After you have made a list, decide what symbols you will use to represent these activities. It’s useful to have a “surprise” or “something different” symbol to help the child recognize when there is going to be something different in their schedule (PISP, 2000).

- Create a visual schedule that will meet the needs of the child. Refer to specific adaptations on the next page.

- It is important for the child to understand the concept of finished therefore a method of showing that an activity is finished is needed. You could have a finished box, folder, bag etc. in which the child places the object/picture/word in to indicate when the activity is all done (PISP, 2000).

- Start out each activity on the visual schedule by telling the child that, “It’s time to ___”, and help the student point to/feel the object/picture/photograph/word. When the activity is finished, have the child place the activity in finished box/folder/bag and then repeat the process (PISP, 2000).

- “Remember that the symbol needs to be paired frequently with the actual activity for learning to occur. Thus, during the activity, it will be important to pause the activity and re-introduce the symbol for the student to “look at”/“reach”/“touch” and then reinforce his response by going back to the activity and praising him” (PISP, 2000).

- “With repeated exposure, positive feedback and repeated pairing of the object with the activity, the student will come to anticipate activities when he sees the object. This process will also help to teach the student that activities have a start, middle and end to them” (PISP, 2000).
Visual Schedules continued...

Specific adaptations:

- **Symbols:**
  - Objects of reference, pictures, photographs, object/picture/word combinations

- **Ways in which the schedule can be presented:**
  - Wall charts:
    - Pictures, photographs, words or objects
    - Objects can be hung on hooks.
  - Boxes:
    - Objects
  - Books, folders, or binders:
    - Pictures, photographs, or words
  - Plastic strips or pages:
    - Pictures, photographs, words or objects
  - Paper or index cards:
    - Pictures, photographs or words
  - Clipboards
  - Blackboards

- **Durability:** If laminate is available it can be used to cover the base-board and the picture symbols to make them more durable.

- **Adaptability:** Velcro can be used within books/folders etc. and on the backs of the picture/photograph symbols to let you change around the schedule easily.

- **Alignment:** horizontally or vertically

- **Time:** If the individual is learning or knows the concept of time you may include the time that the activity/event will be taking place next to the symbol.

- **Indicating when things are all done:** If the child is unable to place the symbol into the finished folder/box/bag, the teacher/adult may have to place it in for them while making sure that he/she is apart of the process.

Examples:
Understanding the environment:  
**First/Then Schedule**

**Purpose:**

The primary use of a first/then board is to help motivate and assist a child finish an activity that he/she does not like to do by reinforcing it with an activity the child really enjoys. A first/then board visually shows the child that after they do something they do not like he/she will get something that they really like. It is another strategy that can help with problem behaviors.

A first/then board can also be used in a variety of other ways:

- Assist with transition from one activity to another
- Breaking a large schedule or sequence of events into smaller steps

First/then boards can help the child to understand and predict what will happen next much like a visual schedule does.

**Who may benefit?**

Children who have: problem behaviors, problem with transitions, a high need for predictability, anxiety, lack of motivation, and lack of attention

**Where to begin?**

- Find something to use as the base-board that is large enough to place the symbols on (a file folder, poster board, a piece of cardboard or a piece of paper). Create a dividing line to separate the ‘first’ and ‘then’ sides; draw a line vertically on the baseboard. Once the baseboard has been divided, label each of the sides.

- As you use the “First/Then” board with the child, try to place a reinforcing activity or item on the “then” side of the board. This will increase the likelihood that the child will complete the activity/activities on the “first” side of the board.

- When each activity is completed remove the symbol from the base-board to let the child know that the activity is finished.

- If using the first/then board as a way to help with transitions place the activity that will come first on the left side and the activity that will come after the first activity on the right. The left side represents a mini schedule of activities prior to the transition to the activity pictured on the right.

- When using the first/then board remember to always tell the child while showing them on the board that “First _____ and then _____”.

Continued on next page...
First/Then Schedule continued...

Specific adaptations:

- **Symbols:**
  - Objects of reference, pictures, photographs, object/picture/word combinations

- **Amount of activities:**
  - First/Then boards can be broken down into two-step activities. For example, “FIRST: clean up, THEN: go outside.”
  - First/Then boards can be broken down into a sequence of steps followed by a reinforcer or the next transition. For example, “FIRST: color-cut-glue, THEN: computer.”

- **Durability:** If laminate is available it can be used to cover the base-board and the picture symbols to make them more durable.

- **Adaptability:** Velcro can be used on the base-board etc. and on the backs of the objects/picture/photograph symbols to keep the objects/pictures/photographs on the base-board in the proper place.

- **Spacing:** placing the choices closer or further apart

Examples:
In this section you will learn about specific systems that children use as their ways of expressing their wants/needs, opinions etc. These systems become the children’s voices and are not to be used to help children understand their environment.
Expressing:  
Object Symbol System

What is an object of reference system?

Some children have difficulty understanding that a picture can refer to an object or activity therefore, real objects or parts of objects (otherwise known as objects of reference) have to be used (Scott, 1998).

An object symbol system uses objects of reference to communicate the child’s wants, needs, thoughts and feelings. The child is taught to point to, or show the object, which can represent the actual object, an activity or a phase, to the person he/she wishes to communicate with.

Who may benefit?

- Object of reference systems are helpful for children who have memory difficulties, are visually impaired or have severe learning difficulties or multiple disabilities. Objects of reference require skills that rely on perceptual rather than cognitive abilities, recognition rather than recall memory thus placing fewer demands on the child (Scott, 1998).

- Objects of reference may also be used initially with children to act as a transition to help the child understand that things can represent other objects, activities etc. Real objects are apart of children’s everyday lives and are therefore a lot easier for children to understand what those objects can mean within their lives (Scott, 1998).

- Children who have not been exposed to pictures or photographs throughout their life may also benefit from using object symbol systems.

Where to begin?

- The first thing you need to do is create a list of vocabulary or phrases that the child will need in a variety of settings. This part of the process is extremely important because you are preparing what words the child will and will not have. It is important to think about and observe different environments that the child experiences within a day. For example, vocabulary needed at school, at home and out in the community.
  
  o Vocabulary should always be updated to make sure the child always has the words that he/she will need.

- The second important task is deciding what objects will be used to represent the child’s words or phrases. For information and examples on selecting objects to use, see appendix A (Setting Up an Object Symbol System).
Object Symbol System continued...

Where to begin? (Continued…)

- When first introducing the object symbol system start with only providing the child with a few objects of reference (too many objects of reference in the beginning can be overwhelming) and practice using the objects of reference as a communication exchange (for example, the child is prompted to hand you the object of reference and then do the activity or give them the item in return).

Specific adaptations:

- **Initial stages:** In the beginning, to help the child learn that the objects can represent an activity/phrase/item expose them to an object visual schedule. However, do not use the visual schedule as an expressive object symbol system.

- **Issues of portability:** The tricky thing with object symbol systems is carrying around the objects of reference. The object symbol system is the child’s ‘voice’ therefore you want them to be able to access the objects of reference whenever they need or want them.

  o Create a communication box which holds all of the objects of reference and make sure the child has access to the communication box at all times. Separate boxes could be created for different environments so objects of reference that are only used in specific locations are not being carried around everywhere.

  o Keep the objects of reference in a backpack, which can be carried with the child wherever he/she goes.
Expressing:

**Communication Book**

What is a communication book?

As said by Purnell et al. (2010) “A communication book is used to help a child to communicate their needs, thoughts and feelings. It includes pictures, line drawings, photos or words that are meaningful to the child. The child points to the pictures to get their message across: they may or may not be able to speak the message as they do this.”

Who may benefit?

Children with a range of developmental disabilities may benefit from a communication book especially children who have difficulties:

- Talking/expressing their wants, needs, thoughts and feelings
- With others understanding what they are saying
  - Some children may verbally communicate, but others have a difficult time understanding what they are saying. These children may also benefit from having a communication board that has picture symbols/alphabet to give the listener a cue to what they are talking about. For example, if the child is talking about something that happened during recess he/she could point to a symbol indicating ‘at recess’ to help the listener know the context of the message the child is trying to communicate. The child could also point to the first letter of the word they are trying to say to help the listener have a hint. Research has shown that by providing the listeners with hints to what the child is talking about significantly helps the listener to understand what the child is trying to say.
- Starting a conversation without help from someone else
- Talking about events or different things in their life

Where to begin?

- Start by making a list of all the vocabulary/words/phrases the child may need. All of the environments in which the child will be involved in should be thought about when creating the vocabulary. You will have to continuously create picture symbols for the objects/words/phrases that the child may need to communicate in different situations.
Communication book continued...

Where to begin? (continued…)

- Once the vocabulary is created picture/photograph symbols should be created.
  
  - Some picture symbols can be downloaded from:
  
  - Pictures/photographs can also be cut out of magazines, flyers, drawn by hand or printed off of the computer

- Create a communication book by using a binder, small photo album etc. You should consider if the child will be carrying around the communication book him/herself when choosing what time of book will be used.

- The next biggest and maybe one of the most challenging tasks is deciding how you will organize the vocabulary/symbols. Communication books can be organized in a variety of ways. They can be organized by categories (eg. food, places such as school/community), by events/activities (eg. circle time), by topic (eg. weather) or by communication function (eg. “I want something”; “I have something to tell you”).
  
  - Color coding the different sections of the communication book can be very helpful for the child. For example, the pages that have vocabulary for circle time could all be blue; for meal time all the pages could be red etc.

- A page that contains only the alphabet can also be included for individuals who are literate so they are able to spell out and create their own messages.

- A page should always be created and placed at the beginning of the communication book to assist others to use the communication book with the child most effectively. The page should include things like: “An introduction with the child’s name and an invitation to communicate; a brief description of why the child uses the communication book and simple instructions on how to present object symbols to the child, how to interpret their response, and how to respond” (Northcott, 2008).

Specific adaptations:

- **Symbols:**
  
  - Pictures, photographs, picture/photograph-word combinations

- **Amount of symbols (vocabulary):** It is best to start out with a limited amount of symbols and slowly increase the amount when the child become use to using the communication book so that the child does not become overwhelmed.

Continued on next page...
Communication book continued…

Specific adaptations (continued...):

- **Selecting the choices**: If the child has a physical impairment you need to think about how they will select their words/phrases. Refer to page 4 to see suggestions for alternative ways for the child to make their selection.

- **Spacing**: placing the choices closer or further apart

- **Vocabulary**: Vocabulary should always be adapted to provide the individual with words they may need to communicate in particular situations

  - For example: in school –vocabulary for different school lessons that are taught

- **Issues of portability**:

  - The PECS binder is the child’s ‘voice’ and should be with the child at all times. If there are issues with the child carrying around the binder him/herself then communication boards can be mounted on the walls in different locations of the house with the words/vocabulary that they will need in the specific environment - in short, mounted in any and all of the places the child may go, so that opportunities and vocabulary for communication are always available.

  - Theme boards can also be created. These are communication boards that have specific vocabulary on them for a particular activity. For example, an art theme board could have vocabulary such as: things the child may need like ‘I need’, ‘scissors’, ‘paper’, ect. as well as different colors and social comments such as ‘Yours looks nice’ etc. Theme boards can be created for all types of situations such as mealtimes, car time, swimming lessons etc. Theme boards helps with portability issues. If the child may only need certain words for a certain activity it is better to have a them board to make sure the communication book does not become to heavy or over crowded with symbols the child will not be using all of the time.

Example theme board:
What is PECS?

PECS stands for Picture Exchange Communication System (Mirenda, 2004).

In PECS, learners are taught in a series of phases to exchange picture symbols for desired items rather than point to them on a communication display; the communication partner then provides the requested item or activity (Beukelman & Mirenda 2005).

This method encourages the child to approach another person to communicate with them. Research has shown that this method enhances the child’s understanding of language, contrary to the many concerns that it may hinder it.

Who may benefit?

PECS was created for children with autism and other complex disabilities. However, most of the research done with PECS has focused on its use with children with autism.

Children who may be missing skills such as functional communication, social interactions, appropriate play, turn-taking and attending to things that are important may benefit from using PECS (Frost & Bondy, 2002).

Where to begin?

- Start by making a list of all the things the child really likes (for example, cookies, bubbles) and then create picture symbols for the desired items. Some picture symbols can be downloaded from: http://www.childrenwithspecialneeds.com/index.php?option=com_content&view=article&id=85&Itemid=66

- Create a PECS binder by putting Velcro strips on the front of a binder and on pages within the binder. Velcro should also be placed on the back of the picture symbols. In the beginning the picture symbols will only be placed on the front of the binder. The pages in the binder can act as a place to store all of the picture symbols. When the child is in the late stage of phase 3, he/she will use all of the pages in the PECS binder. To see a PECS binder already made refer to examples on page 23.

- You will have to continuously create picture symbols for the objects that the child enjoys and when the child reaches the later stages you will have to continuously create words they may need to communicate in different situations.
PECS continued...

Where to begin? (continued...)

There are six phases to work through when teaching the child how to communicate using PECS. Remember, children learn best when things are broken down into smaller steps.

Phase 1:

Goal: *Spontaneously requesting objects or activities.*

* Within the first stage it is important to have two people working with the child.

1. One teacher sits in front of the child while the other sits behind.

   Roles:

   The person in front: holds desired objects of the child and waits until the picture symbol is handed to them. Once the picture is handed to them by the child, they say “oh, you want the ____.” And then the desired object is given immediately to the child.

   The person behind: Once the child reaches for the object, hand over hand prompt the child to pick up the picture symbol for the desired object and hand it to the person holding the desired item.

   - There should only be one picture symbol placed on the outside of the binder
   - Do not ask the child “What do you want?”, it is important that the request be spontaneous. If the child is not reaching for the item then you need to find something else that the child really wants.

2. Trials should be repeated while hand-over-hand prompting is faded out as the child begins to reach for the picture symbol to request an item Once the child can consistently initiate reaching for the picture symbol by themselves to request an item then it is time to move on to the next phase.

   * If you have access to the internet, a demonstrational video can be found at: http://www.youtube.com/watch?v=ZP48lxnNdHM

Phase 2

Goal: *Increasing spontaneity and persistence by making distance between the child and the person in front or the picture symbol.*

1. Start the trials in the same way as phase 1 except create a bigger distance between the front person and the child or the child and the picture symbol. This makes the child have to move to get the picture to get the object or to bring the picture symbol wherever the front person is.
Where to begin? (Phase 2 continued…)

- In the beginning the person behind the child may have to prompt the child to go get the picture symbol or go give the picture symbol to the person in front. Remember to fade out the prompting as we want the child to communicate spontaneously.

2. Teach the trials in different rooms so that the child learns that communication does not only happen in one place. Once the child is going further away to obtain the pictures to request specific objects it is time for phase 3.

* If you have access to the internet, a demonstrational video can be found at: http://www.youtube.com/watch?v=tr31QXNEcps&feature=related

Phase 3

Goal: Discrimination

1. Obtain two different objects; one that the child strongly dislikes and the other something the child loves.

2. Place the two different pictures in front of the child and show them the two different objects. When the child hands you a picture give them the one that matches with the picture symbol he/she has given you. (Your response: “You want the ____.”) If the child acts by trying to reach for the other object then say “If you want a cookie you need to ask for a cookie” and show them the picture of the cookie.

- If the child is continually grabbing a picture symbol without looking, work with them on looking at the pictures. Hold up the picture for the cookie with the cookie and say “Look this is a cookie (holding up the picture symbol) and this is a cookie (holding up the real object) then alternate to the other object.

3. Once the child has mastered discriminating between two objects start adding more gradually. The goal for the child is to be able to discriminate between an unlimited amount of picture symbols.

4. As the child becomes more skilled at discriminating he/she should be taught to flip through the binder to find the picture symbols instead of always placing them on the front of the binder. At this point you can also start making the child use PECS in a variety of settings.

* If you have access to the internet, a demonstrational video can be found at: http://www.youtube.com/watch?v=LbGuSlRugSo&feature=related

Continued on next page…
Where to begin? (continued...)

Phase 4

Goal: Completing “I want” sentences

* Previously create a communication strip that contains Velcro for the child to place different pictures to make simple sentences. See picture example on page .

1. Use the same type of setting as phase one. Obtain a picture to represent “I want”

2. Begin by having the “I want” picture already on the strip. Then, with the desired object picture symbol, guide the child to place it on the communication strip next to “I want”

3. Guide the child to then give the sentence strip to the person with the desired object. Read the strip when they give it to you: “I want ____.”

4. Once the child consistently does this, move the “I want” picture off the sentence strip and when the child wants something guide them to first place the “I want” picture symbol, then the picture symbol for the desired object.

5. Repeat guidance and gradually fade out until the child can complete the steps on his/her own.

* If you have access to the internet, a demonstrational video can be found at: http://www.youtube.com/watch?v=vPRZIg9levk

Phase 5

Goal: Responding

Within this phase the child is asked “What do you want?” and the child is taught to respond to the question. The same teaching methods done in previous phases should be applied. Children usually move quickly through this stage.

Phase 6

Goal: Shifting

1. Pictures for ‘I feel’, ‘I see’, ‘I like’ etc. are applied to the child’s knowledge.

2. Commenting is also stimulated amongst daily tasks by teaching a child to create communication even when they do not want something in particular. For example, When eating dinner together say things to the child “Mmm... I like bananas. What do you like?”

Continued on next page...
Where to begin? (Phase 6 continued…)

3. More complex picture discrimination can be applied by adding adjectives.

* All of these things can be taught in the same way as in previous phases.

All of the phase information has been adapted from Frosty & Bondy (2002) and Wallin (2004).

Specific adaptations:

- **Size:** The size of picture symbols is important to take into consideration for children with visual impairments and for children with fine motor deficits.

- **Vocabulary:** Vocabulary should always be adapted to provide the individual with words they may need to communicate in particular situations
  
  o For example: in school – vocabulary for different school lessons that are taught

- **Issues of portability:**
  
  o The PECS binder is the child’s ‘voice’ and should be with the child at all times. If there are issues with the child carrying around the binder him/herself then PECS templates can be mounted on the walls in different locations of the house with the words/vocabulary that they will need in the specific environment. Also, mealtime placemats, car dashboards, refrigerators boards, bathtub tiles can also be created – in short, mounted in any and all of the places the child may go, so that opportunities and vocabulary for communication are always available.

Examples:

- Straps can also be added to the binder or the binder could be placed and carried around in a carrying case.
Appendix A
Setting Up an Object Symbol System

Object symbols are used to represent specific items, events, and activities, by children who find it difficult to understand photographs, words, and signs. Object symbols can be made using real life objects or parts of objects (“remnants”). Object symbols can be used to inform children about a change in their daily activities (as you would with a visual schedule) or be used expressively for requesting.

An object symbol must be meaningful (or become meaningful through teaching) for the child that will use it. That is, when setting up an object symbol system, observe and consider what objects or sensations the child associates with each activity, item, or event. From your observations and knowledge of the child, choose an object symbol that they will most easily relate to each activity being represented.

Following are the steps to setting up and using an object symbol system. At the end of this handout, there is also a list of suggestions for items that may be suitable to use as object symbols for various activities. Remember, though, each individual child will associate different items with different activities. What may be suitable for one child, may not suit another.

1) Choosing and collecting object symbols – Object symbols need to be chosen carefully for each child to work out which object symbols will best suit them. This would include what they would relate to best, as well as what would provide appropriate sensory feedback (e.g. tactile feedback, visual appeal, objects that make sounds). Determine which items/activities in the child’s routine need to be represented. This would include activities or items the child used/is involved in regularly and should include preferred or special activities or items. Collect relevant object and items for the object symbols. You will probably find them in a variety of places (e.g. packaging from household items, small items from the supermarket or bargain shops, spare items around the house, or available in the community.)

2) Set up and storage - Where possible objects should be mounted on cardboard with Velcro™ or Contact with the word of the item or activity written on the bottom. This ensures that everyone using the objects realises they are for communication purposes and ensures everyone is using the same key word with the object.

Object symbols generally need to be stored in a practical, easy to access way. Make sure the object symbols are in a place where you can pull them out whenever needed quickly and easily. You may like to set up an “object symbol box” or container, where they can be stored without being damaged.

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3) **Access and Presentation** – *Determine how the child will access the object symbols.* Will they pick them up with their hands? Will they point to them with their finger? Will they use their eye gaze to indicate the preferred choice? This will depend on what is easiest for them.

4) **Purpose** – *What will the object symbols be used for?* Initially, they will most likely be used to inform a child that an activity or event is about to happen, this will also help them learn the association between the object symbol and the item or event. Before each activity show, child the object and help them touch/feel it. Say to child, “It’s time for X”

It is important that the objects be used consistently so that child learns to make the association between the activity/event and the object.

Note the child’s reaction when given the object so that you can monitor their reactions over time – Are they starting to anticipate the activity? Do they show excitement if given the object for an activity they like?

The object symbols can also be used for requesting. Present two or more object symbols to the child and encourage them to indicate which one they would like. Ensure their choice is always available; ensure it is given immediately so the connection between the object symbol and activity can be learnt.

5) **Instruction for others** – To assist others to use object symbols with the child most effectively, make sure you include some simple instructions with the system. This could be in the form of a “Book About Me” and could include:
- An *introduction* with the child’s name and an invitation to communicate
- A brief description of *why* the child uses the object symbols
- *Simple instructions* on how to present object symbols to the child, how to interpret their response, and how to respond.

### Examples of Object Symbols

<table>
<thead>
<tr>
<th>Activity/Event/items</th>
<th>Suggested Object Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having a bath/shower</td>
<td>Soap, piece of towelling (to represent washer or towel), bath sponge, bath toy, shower cap</td>
</tr>
<tr>
<td>Brushing teeth</td>
<td>Toothbrush, toothpaste container</td>
</tr>
<tr>
<td>Washing hands</td>
<td>Soap, piece of towelling</td>
</tr>
<tr>
<td>Toilet</td>
<td>Belt buckle (for potty chair), toilet roll, nappy</td>
</tr>
<tr>
<td>Mealtime</td>
<td>Piece of cutlery, bib, plate,</td>
</tr>
<tr>
<td>Drink</td>
<td>Copy of favourite cup, empty “popper” container, drink bottle, drinking straw</td>
</tr>
<tr>
<td>Getting dressed</td>
<td>piece of clothing</td>
</tr>
<tr>
<td>Going in the car</td>
<td>Seat belt buckle, piece of fabric like car seat cover,</td>
</tr>
<tr>
<td>Listening to music</td>
<td>pair of headphones, Piece of fabric from chair used whilst listening to music</td>
</tr>
<tr>
<td>Watching TV</td>
<td>Piece of fabric from chair used whilst watching TV,</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Activity/Event/items</th>
<th>Suggested Object Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming</td>
<td>Piece of towelling, swimming costume, piece of swimming costume fabric, goggles, swimming cap</td>
</tr>
<tr>
<td>Fast food restaurant</td>
<td>Food wrapper, replica of hamburger/other food, menu</td>
</tr>
<tr>
<td>(e.g. McDonalds)</td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td>Computer mouse, mouse mat, switch</td>
</tr>
<tr>
<td>Bedtime</td>
<td>Piece of blanket, replica of stuffed toy or other comforter</td>
</tr>
<tr>
<td>Read a story</td>
<td>book, piece of fabric from chair sat in during story time</td>
</tr>
<tr>
<td>Play Doh</td>
<td>Play Doh/cookie cutter, empty Play Doh container, small rolling pin</td>
</tr>
<tr>
<td>Doll play</td>
<td>Piece of dolls clothing, doll, other relevant item associated with doll play</td>
</tr>
<tr>
<td>Car play</td>
<td>Toy car</td>
</tr>
<tr>
<td>Party</td>
<td>Party hat, party blower, streamer</td>
</tr>
<tr>
<td>Birthday</td>
<td>Birthday candle, miniature present</td>
</tr>
<tr>
<td>Going to the beach</td>
<td>Hat, sunscreen, section of beach towel, bucket/spade, sunglasses</td>
</tr>
<tr>
<td>Going to the park</td>
<td>Hat, piece of play equipment, sandshoe, ball (or other item used to play at the park)</td>
</tr>
<tr>
<td>Trampolining</td>
<td>Piece of trampoline fabric, trampoline spring</td>
</tr>
<tr>
<td>Favourite foods/drinks</td>
<td>Relevant food/drink wrappers or packaging, plastic representations or replica of food items</td>
</tr>
</tbody>
</table>

Remember that items need to be different so if a towel is chosen for ‘bath time’ then something different should be chosen for ‘swimming’. Also, keep in mind, that miniatures (small versions of real objects) may not be representative of the activity. That is, a nappy or toilet roll would be more meaningful than a doll house toilet to indicate toilet.

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Information references:


Remember...

* The use of multimodal communication systems for every individual is important. Individuals should not be discouraged from using speech, gestures, facial expressions etc.

* It is important to remember that it takes time for a child to learn the meaning of the symbols being used. It is important to continuously expose the individual to the symbols in order for them to start to make the associations.

Photo references:
- http://www.topnews.in/
- http://login.npwebsiteservices.com/
- www.pisp.ca/strategies/

Information compiled for RSF-EARTHSPEAK by Nicole Saunders January 2011