

Pixons, Arrows and More!

Kara, from New Zealand asked the following questions about Pixons, the arrows in the Pixons, and helping parents support their children using Pixons. Gail Van Tatenhove, the author and coordinator of the Pixon Project, provided this answer, with input from Carole Zangari, Mark Hammond, and Tracy Kovach.

(This answer is also listed in the Ask the Experts section of the Minspeak website.)

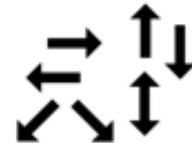
I have some questions from a parent about the Pixon pictures.

1. In Pixon pictures, such as long-short and empty-full, what does the arrow mean?
2. If you have the empty-full Pixon on a child's Pixon board, how do you show the difference to the child?
3. When the child points at the empty-full Pixon, how do you know which word the child is saying? Is it based simply on context?
4. But, how will the child distinguish the difference between the words when opposite words like "happy" and "sad" are in separate locations on a Pixon board?
5. Basically, can you give us some suggestions for teaching Pixons?

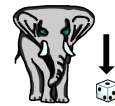
Thank you for sharing this question from a parent about the Pixon pictures. In the answer to your question, I will example to you about the arrows in the Pixon pictures and then cover some ideas for teaching Pixons that have arrows, as well as an overall teaching routine that can be implemented by the family. I hope my answer will help the parent see how much fun it can be to teach Pixons.

Arrows

In your question, you focused on arrows that are in adjectives, but the arrows in any Pixon can mean different things. This is true not only with Pixons, but with most pictures sets or systems used in the field of AAC.



With Pixons, some arrows **point at or to** something in the picture for the person to pay attention to. For the word "big," the arrow is pointing at the elephant, while for the word "little," the arrow is pointing at the dice. The elephant and dice are contrasting sizes and the arrow draws attention to the object in the picture that shows the size word the child is trying to communicate.



The Pixon Picture CD (both the BMPs and Boardmaker files) will have adjectives "options." If you look on the CDs that came in your Pixon Project Kit you will find the following chart of "opposites." (Check #1 – Vocabulary Building Charts). Teachers often print out this chart and post it somewhere in their classroom.

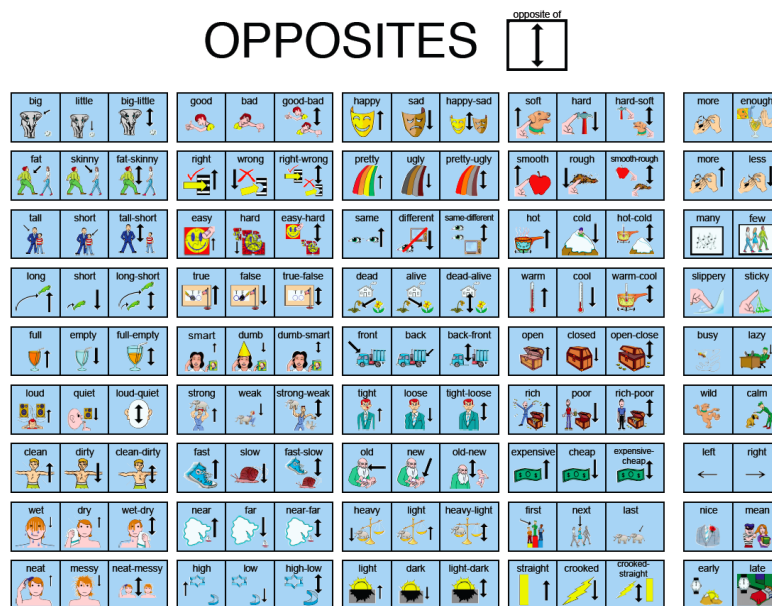
You'll notice on this chart the variety of arrows used to point out the feature that the child is communicating (e.g., big/little, fall/skinny, tall/short, old/new, first/next/last).

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But, you'll also notice that in other Pixons, there are UP, DOWN, and UP/DOWN arrows.

With Pixons, an **up** arrow, generally means "**positive/presence of/greater or more of**" while a **down** arrow means "**negative/absence of/fewer or less of**" Examples are: long/short, full/empty, loud/quiet. The positive/presence of/greater or more of words are: long, full, loud. The negative/absence of/fewer or less of words are: short, empty, quiet. Nature English language speakers intuitively know which word in an opposite pair is positive or negative.

An up/down arrow in a Pixon means **opposite**. The "root" picture for both the positive and negative concept is usually (but not always) the same, so that root picture is used and an up/down arrow is added to communicate both words. Remember, Pixons are based on the Unity® program and the pictures are drawn to coordinate with the icon sequences used in Unity®. If Unity® used the same initial icon for a pair of words (e.g., full-empty), then the Pixon needed to use that initial icon as the root picture in the Pixon.



On the simple Pixon boards, the Pixons used for the adjectives are not generally the Pixons that use the OPPOSITE option. It isn't until you get to very robust boards (e.g., the 198 board laptray board) that opposite Pixons for adjectives are used. However, these opposite Pixons are on the wall chart that is recommended for use in the classroom, therapy setting, or home.

YOUR "TO DO" LIST:

1. Make yourself some small arrows, including own with a pointer at both end.
2. Use the pointers as props in language and Pixon learning activities.

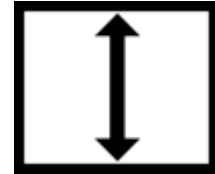
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Two Words – One Location

Selecting and displaying vocabulary on a manual board is always about space management and real estate. You have a limited amount of space on a single sheet of paper and you want to cram as much vocabulary as possible (and the child can handle) into that limited space.

In the example from your question, you mentioned *long/short* and *empty/full*. The reason that those "opposites" are put into the same location (and not separate locations, like happy and sad) is to get as many words as possible in a limited space. This strategy has traditionally used when making manual communication boards. The Pixon Project Team decided on using this strategy, as needed, on the more robust Pixon boards. You will notice on more simple Pixon boards, that the "opposite" option is not used.

Teaching children to communicate "opposite of" is an important Strategic skill for them to learn. If the child is not a speller, he/she is NEVER going to have access to the same volume of vocabulary as a speaking child. So learning the concept of "opposites" and "opposite of" are important and useful vocabulary versatility strategies. The 198-location Pixon board and wall chart use "opposite" Pixons and are there to exposure children to the idea of opposites. On some of the more robust Pixon boards, a Pixon for "opposite of" is included on the board. Children are taught to use "opposite of" as a valuable vocabulary versatility strategy. For example, if the child wants to say "awake", he/she can use "sleep" + opposite of. This strategy is valuable for expanding the child's vocabulary. (See the Pixon Project Kit for other vocabulary versatility strategies.)



YOUR "TO DO" LIST:

1. Consider using more "opposite" Pixons on the child's personal Pixon board.
2. Consider adding and teaching the "opposite of" strategy to expand the child's available vocabulary in his/her Pixon board.

Clarification of Meaning

The communication partner plays a huge role in interpreting which word the child is communicating when he/she selects on of these "opposite" Pixons. Context is the first clue, but it won't always clarify the meaning. The communication partner might have to ask a clarifying yes/no question, such as "Did you want to say "empty?" "Did you want to say full?"



Sometimes the child can clarify the meaning him/herself. Perhaps the child can use his/her eyes to clarify and look up for the "positive" meaning and "down" for the negative meaning. If the child has hand motions, he/she could point his/her thumb up or down to clarify the meaning.

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YOUR “TO DO” LIST:

1. Determine the strategies you will use to clarify meaning.
2. Document and systematically teach those strategies.
3. Be consistent in the use of these strategies.

Teaching Routine

Teaching the concept(s) and the metaphors for the concept(s) requires more than just verbal explanation.

Props: The first principle for teaching non-picture producing concepts and the metaphors used to represent those concepts is hands-on **LIFE EXPERIENCE** using **PROPS**. Select props that represent, as close as possible, the actual objects as shown in the Pixon so you can “act out” the story metaphor that is shown in the picture. Prior to the life experience activity, print out corresponding Pixons for the concepts you are teaching in the lesson. If you are going to teach empty-full, what props do you need? You need glasses, orange drink, straws! What Pixons do you need? You need full, empty, empty-full. What other visual supports might you use? Arrows

Metaphor-Pixon Association: In the example of empty-full, get 3 glasses and 3 straws and some orange drink (e.g., orange juice, mango juice, orange soda, etc.) Help the child to fill one glass full to the top and put in the straw. Leave the second glass empty,



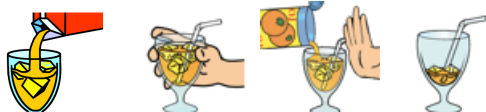
but add a straw. The third, fill midway between empty and full, then add the straw. Compare and describe the 3 glasses. As you talk about and describe the three glasses, use separate arrows to

emphasize the positive/presence of and negative/absence of aspects of the concept. Then, match the Pixon to the correct glass and attach the Pixon to the glass. In this routine, you are providing a life experience that matches the metaphors used in the Pixons..

When working with children with complex communication needs, you cannot assume that they have had the kind of rich life experiences that are common for able-bodied, speaking people. For even the most simple concepts, it is always a good idea to provide a life experience activity when teaching the Pixon. This makes learning the Pixons more meaningful, as well as fun!

Metaphor “Family” Words: While doing the life experience lesson described, you can increase the number of associations that the child makes with the glass of orange drink and introduce additional Pixons to represent these concepts and words.

The child can “pour” the drink, “hold” the glass, tell you “enough” when filling up the



glass, and tell you his/her drink is “almost” gone. All of these words feature the glass with the orange drink in it. The glass with

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orange drink is the “root” for all of these other pictures. While, the child might not currently have these words on his/her Pixon board, exposure to these words and associations helps build semantic networking and prepares the child for either (1) use of a more robust Pixon board or (2) the transition to the Unity® program in a PRC device.

YOUR “TO DO” LIST:

1. Collect objects that match the things in the Pixons so you can do fun hands-on activities.
2. Introduce new Pixons in the activities that use the root object in the Pixon.
3. Encourage the family to do some of these fun life experience activities. The more that the family can build of their child's life experiences, the better their child will be at learning multiple associations to an object.

De-Contextualization

The second principle of teaching non-picture producing concepts and the Pixon is extending the meaning of the word into new contexts. We don't want to limit understanding of empty/full to just glasses. We want to do more life experience activities that take the concepts further and further into new contexts - jars of bubbles that are empty/full, boxes that are empty/full, a school bus that is empty/full of people, my tummy that is empty/full. This process of understanding language and use words in new and expanded contexts is called de-contextualization.

Sorting tasks is a helpful way to provide both semantic instruction, as well as de-contextualization. Using the example of empty-full, sort things into categories of full-not full or full-empty. Other ideas for providing semantic instruction and de-contextualization are:

- Collect a stack of magazine pictures of different containers. Go through them and sort and/or label them empty-not empty-full
- Go around the room armed with Pixons for empty and full. Put the Pixons on different empty-full things that you see.

YOUR “TO DO” LIST:

1. Teach the concepts/words in different contexts.
2. Provide repetition (in saying these words) with variety (expanding contexts).

Learning Opposites when in Separate Locations on the Pixon Board:

Most of the adjective words on the simple Pixon boards are assigned separate locations. In your question, you referred to “happy” and “sad.” Words on the Pixon words were assigned separate locations (like happy/sad, good/bad) because of their frequency of use. The teaching process for these words is the same as the process described above.

A life experience teaching routine that simulates the metaphor in the Pixon picture for happy/sad is to make a happy mask and a sad mask from paper plates. Do this as an art project and use finger paint to color one yellow and one brown. To add some

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technology use to this project, program a Step-by-Step with a series of sounds that are happy sounds (laughing, whistling) and another Step-by-Step with a series of sad sounds (crying, sighing). Put on the appropriate mask, then play the sounds and act them out. Program both happy and sad sounds on 1 Step-by-Step and when the child hears each sound, have him/her select the appropriate mask to wear. Finally, stop using the masks and just listen to the sounds and then "label" the emotion using the appropriate Pixon on the board. This builds use of the Pixon on the board along with a motor pattern for selecting that word. There are multiple levels of teaching/learning going on - from identifying sounds and emotions to learning the Pixon and developing a motor pattern for saying that word.

YOUR "TO DO" LIST:

1. Have more fun when teaching Pixons!
2. Share your ideas and enthusiasm with others.