Levels, Spaces, and Holes AT THE SENSORY TABLE

by Thomas Bedard

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Play acts across several adaptive systems to contribute to health, well-being, and resilience. These include pleasure and enjoyment; emotional regulation; stress response systems; attachments; learning and creativity.... The quality of children's environments influences their ability to play.
(Lester & Russell, 2010, p. ix)

For me it begins with a story and a reflection, which lead to a framework for building easy-to-make, low-cost apparatus to enrich and enhance children's play at the sensory table. It culminates in a set of axioms for sensorimotor play gleaned from observations of children exploring these different constructions installed in and around the sensory table.

Twenty-seven years ago, a mother brought in a big green pail and asked if I could use it. She worked at a fast food restaurant and the bucket was from a container of hamburger dill pickle slices — five gallons worth! I accepted her offer, but because I had a small classroom, I did not know where to put it. For the time being, I decided to put it in the corner near the sand table to hold the extra sand toys.

If you have been around children long enough, you can easily imagine what the children did first: dump all the sand toys from the bucket into the sand table. That did not surprise me. What happened next, though, did surprise me. Children started transferring the sand from the table into the bucket and vice versa. When I stopped to think about what the children were doing, I remembered all the times I had said, "Don't dump the sand on the floor!" My blood pressure would go up and so would my voice. With the bucket in place, though, I was able to change my message and tone from a negative to a positive by telling the children to "Put the sand in the bucket." When I did that, I got another surprise: they willingly obliged.

Transporting as an Overarching Process

With the bucket ensconced next to the table, besides giving me an opportunity to be more positive with my request to the children, I realized the children were telling me that they had an innate drive to transport stuff. Where does that drive come from? It may be a life skill that harkens back to the time when our very survival as a species depended on our ability to transport the necessities of life. Even today as adults we are always transporting stuff. Today's society depends on transporting; there are whole industries built around transporting with cars, trucks, boats, and trains. And transporting was happening at the sensory table in my classroom.

I began to see transporting as an overarching operation in children's play at the sensory table. To be sure, there are many other operations, such as scooping, filling, and dumping, but transporting seemed to be all-embracing. Children were very clear about the need to transport objects and materials out of and into the table. With that understanding, I started to build installations and apparatus in and around the sensory table allowing the children to transport any medium back and forth.

As I created more constructions and added more pieces to the sensory table a framework for building emerged, which incorporated some basic elements and orientations. The three elements and orientations for the framework are: 1) levels (incline), 2) spaces (horizontal), and 3) holes (vertical). The framework is generative, allowing practitioners to create any number of constructions to fit their own program and the children's interests and needs.

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Framework for Adding Apparatus

ELEMENTS	ORIENTATIONS
Levels	Incline
Spaces	Horizontal
Holes	Vertical

Photographs by the author

Element #1: Levels

When children are offered a variety of levels, such as the planter trays stacked on several levels, transporting is constructive, but also more provocative. As a consequence, play becomes multi-level, both physically and metaphorically.

Element #2: Spaces

Constructions offer a myriad of unique spaces for children's operations. For instance, the cardboard divider apparatus pictured takes sheets of cardboard duct-taped together to produce six individual spaces.

These spaces are not really individual, however, because as you can see, the children are transporting the medium through the windows in the cardboard partitions. In fact, the barriers produce a certain amount of challenge and intrigue to the act of transporting for the children. In addition, and a bit of a surprise, these new cardboard walls with windows in the sensory table actually fostered all kinds of unique social play, such as rollicking games of peek-a-boo through the windows.

Element #3: Holes

What child does not like holes? By including holes in an apparatus, a little magic is created: things disappear and things reappear.

By simply embedding one box inside another and cutting holes in the boxes to create a box tower, a whole new world of imagination opens up for the children. The box tower becomes a machine into which the children feed ingredients through the holes to make cement or smoothies or even pancakes. By offering holes, children's play is limited only by their imagination. Look at this record of what the children said while putting sand in the holes of the box tower. There is a recipe for chocolate pie on the bottom half. The recipe was Owen's and he made a point of writing his name on a piece of paper so all would know it was his recipe — and "that's the recipe for the day." (He must watch the Food Channel.)

Orientation #1: Incline

An example of an incline orientation is a large wardrobe box propped on an angle over the sensory table. In the picture, the children scoop the feed corn from the table and pour it down the box through one of several holes cut in the box. Corn exits the box through a slit at the bottom of the box into a tub next to the table: constructive transporting at its best. There is a distinctly aural learning component to this apparatus. The big hollow box augments the sound of the corn tumbling down the box so the child at the bottom learns when to expect to see corn coming out of the box.

Photographs by the author

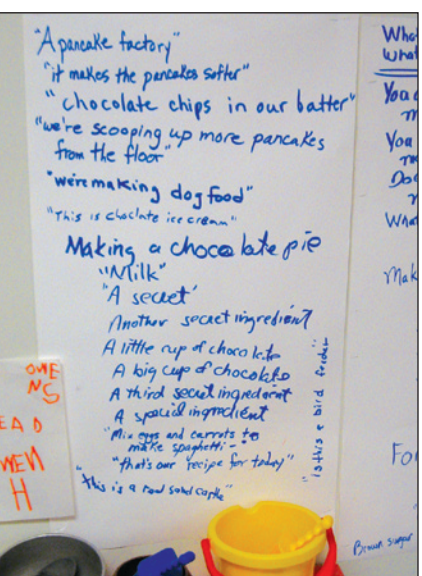
Orientation #2: Horizontal

An example of a horizontal orientation is a long, narrow box set on top of the sensory table. One whole side is cut away and channels are inserted. The channel apparatus allows children to experience space with their operations on a horizontal plane.

Orientation #3: Vertical

An example of a vertical orientation is tubes inserted vertically in a box. This orientation allows the children to experiment with flow rates. How would they do that? When they cover the tubes on top with different size funnels, they could look underneath the box to see how fast or slow the sand is flowing.

Look at the picture of the vertical tubes in a box again. First, note that besides the vertical orientation, there are other elements incorporated in the design. There are obviously holes, but there are also levels (above and below) and spaces (the box divides the table into two distinct spaces). You now begin to realize that there is no limit to what you can build when you combine elements and orientations for children to transport constructively.



Children's Usage and Capacity

By building apparatus for the sensory table, it is not unusual to find eight or more children totally engaged around it. How can that be? To understand, I need to return to the bucket mentioned near the beginning of this article. Something else happened with the bucket that transformed my practice in the classroom at the sensory table in a very profound way: I saw that when they had a constructive outlet to transport, they managed their own behavior quite nicely; I no longer felt the need to micromanage them. There was a cascading effect to this transformation. Since I no longer needed to micromanage the children's behavior, I was able to observe more. And the more I observed, the more I saw the children managing their own actions. That does not mean there are no conflicts; but it does mean that given the chance (adult nonintervention) and the provisions (ways to constructively transport), the children negotiate their needs and wants with each other with minimum strife and a surprising amount of cooperation and accommodation.

Axioms

Building and adding apparatus to the sensory table resulted in developing a set of axioms on how children play, explore, and learn with this new approach to a familiar piece of equipment in the early childhood classroom. I invite you to play with these ideas and to consider your own resourcefulness in creating intriguing spaces for children that offer them new possibilities for play and learning at the sensory table.

Axiom #1: Children need to transport whatever is in the table out of the table.

***Corollary to axiom 1:** During the transporting, children will spill.

Axiom #2: Children will explore all spaces in any given apparatus, no matter how big or small.

***Corollary to axiom 2:** More spaces equal more exploration.

Axiom #3: Children will find all the different levels of play for any given apparatus.

***Corollary to axiom 3:** Children will use all levels of play including the highest and the lowest — which includes the floor.

Axiom #4: Children are naturally drawn to pouring, rolling, or sliding materials and objects down ramps, chutes, and tubes.

Axiom #5: Children are compelled by nature to put things in holes.

***Corollary 1 to axiom 5:** Children will find every hole in and around an apparatus no matter how big or small.

***Corollary 2 to axiom 5:** Children, whenever possible, will modify the holes of any given apparatus.

Axiom #6: Children will try to stop or redirect the flow of any medium in the table for any given apparatus.

***Corollary to axiom 6:** Children, whenever possible, will try to completely block the flow of any medium.

Axiom #7: Children will always devise new and novel activities and explorations with the materials presented that are tangential to the apparatus itself.

Axiom #8: Children will fill any and all containers with the medium or materials provided.

***Corollary to axiom 8:** Children need to empty any and all filled containers.

Axiom #9: Children will pursue their own unique physical challenges when working on, at, or next to an apparatus.

By the way, I still honor that lowly bucket by having one at the ready next to the sensory table at all times.

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