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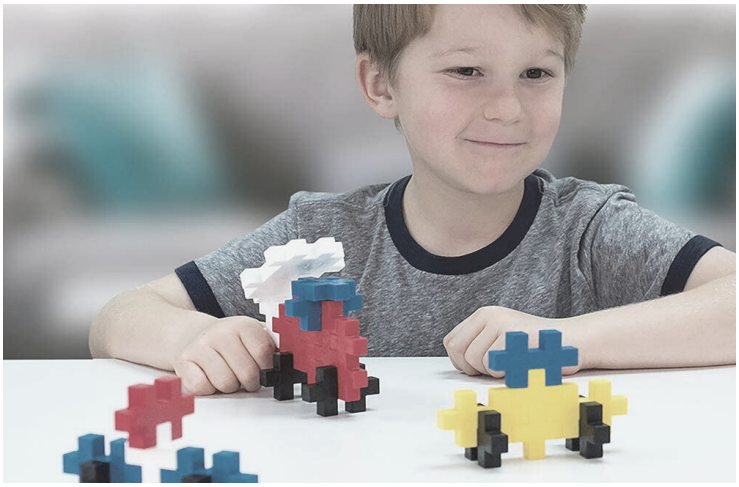
Incorporating Puzzle & Block Play into Kinderkinetics Lessons to Boost Spatial Skill Development



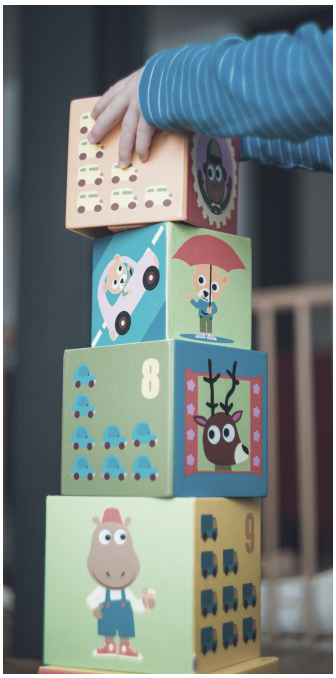
> Spatial awareness is a complex skill that children develop from an early age.

BY ANNIKA VILJOEN

Spatial awareness is a complex skill that children develop from an early age. It refers to a person knowing where their body exists in space in relation to objects or other people. To have good spatial skills one also needs the capacity to mentally generate, transform and rotate a visual image and respond to the change in position. Children require these skills in everyday life, for example: determining left from right, the ability to walk without bumping into something and being able to dress themselves.

Spatial language enables children to express their needs and concerns and describe and discuss the world around them.

We are born spatially aware. At birth, we can discern and track our parents' movements. Minutes after birth, infants are more likely to track a human-like face than a blank head outline, and prefer face-like patterns to patterns in which facial features are scrambled, suggesting that they can discriminate between the two. Even at this young age, infants pay attention to features of objects.



There is evidence suggesting that when children play with spatial toys this correlates with spatial skill development. Puzzles and blocks are two of the most common spatial toys that children play with from a very young age.

Puzzle building is a fun way to develop children's spatial skills and they are available with increasing complexity to challenge children as they grow. They start with wooden pegboard puzzles that require matching the image and shape of each piece to a space in a board, then progress to wooden puzzles with pieces that overlay directly onto an image with pieces fitting together inside one large picture.

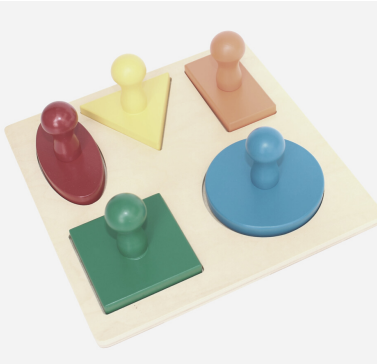
Children end with interlocking jigsaw puzzles where the picture (usually shown on the top of a puzzle box) that needs to be replicated is a different scale, and one needs to figure out the overall size and shape of the puzzle.

The difficulty level of a jigsaw puzzle depends on the size, number and shape of the pieces. The complexity of the target image influences the difficulty of such a puzzle as well.

> **Puzzles and blocks are two of the most common spatial toys that children play with...**

Block play also has different complexity levels. Young children start off by carrying blocks around, collecting them and sorting them. With this stage they experiment how the blocks fit together. They then progress to making horizontal and vertical rows with the blocks and they also start stacking the blocks on top of each other to build a tower.

In time, children learn how to make bridges. For example, placing two blocks side-by-side with a space in between them, with a third block on top. This shows how they develop the understanding of spatial awareness, where they perceive spatial relationships with the environment around them.



Puzzle and block play vocabulary is an easy way to teach children the concept of spatial awareness. Using words such as above, below, in front of, next to, shape names, edge, rotate and flip give children a better understanding of the spatial relationship of an object in their environment. These two spatial toys can easily be incorporated in a gross motor activity to help develop a child's spatial skills.

The puzzle and block play should not be the main focus however when exercising spatial skill development, but just an add-on activity to boost the understanding of spatial skill development. The main focus should still be the overall gross motor development of the children.

For example, picking up a wooden pegboard puzzle piece, whilst doing a wheelbarrow walk and placing the puzzle piece in the wooden pegboard that has been placed 10 meters away. Continue this exercise until all the pieces are in the pegboard. Another example is to roll on a gym ball into the plank position (feet on the ball and hands on the ground) and build a block tower with one hand.

With both these exercises hand–eye coordination is also developed. When children flip, turn, remove and rotate the pieces, they are learning the connection between their hands and their eyes. The brain, eyes and hands work together to find the puzzle/block, and manipulate it accordingly to execute the given task.

With so much variety, incorporating puzzle and block play into your Kinderkinetics lessons can provide opportunities for children of all ability levels to learn, and to improve their spatial skills.

ABOUT THE AUTHOR

Annika Viljoen completed her Honours degree in 2014 at the University of Stellenbosch. Thereafter she started working at Bridge House School in Franschhoek, where she teaches all the gross motor development movement lessons for the two–six-year olds. Annika has also developed sport-specific skill programmes for the Grade 1 children at Bridge House. These programmes cover tennis, cricket, hockey, soccer, netball, swimming and rugby skills. She is also a part-time baby massage instructor, with qualifications from the International Association of Infant Massage (IAIM). Annika has also recently qualified to become a Baby Spa practitioner.