

Building Number Sense with Early Years

In the Early Years, children have a desire to make sense of their world around them (The Kindergarten Program, 2016). Through their natural curiosity and everyday experiences, it is possible to build their Mathematical understanding and sense of number.



Taking Part in Math Conversations:

Math is all around us. It is important to naturally make Math part of the daily conversations that you have with your child. This may happen when you are making comparisons with your child (e.g., “Who has more cookies?”, “We live on the 3rd floor, and they live on the 5th floor.”), or by making observations (e.g., “We need four cups so each of us can have a drink.”, “I have a four on my shirt.”). We encourage that these conversations occur both inside and outside the home (e.g., at the grocery store, in the car, on the bus, while reading books).



Counting One-to-One:

When students learn to memorize the order of the numbers through rhyme and song just like the alphabet. The next step is to help build an understanding that the number of the count matches the number of objects. When counting with your child, encourage them to touch the object that they are counting.



At the end of the count, ask him/her how many there are all together. You may see that he/she counts the group again. Begin with counting small sets of a variety of objects (e.g., cars, blocks, utensils), and slowly increase as your child becomes more comfortable and confident.

Understanding Quantity and Small Sets of Number

In the Early Years, we focus on developing the understanding of numbers 0-10. Through the

exploration of small sets of different objects that children use naturally (e.g., fingers, materials found outdoors, etc.), an understanding of quantity and number can develop.

Exploring Baking/Cooking Experiences

- While following simple recipes (e.g., popsicles, trail mix), have your child help measure and add the ingredients. This provides a great opportunity to discuss ‘how many/much’ is needed (e.g., “Can you keep track on your fingers how many cups we added?”), and more/less (e.g., “We added more flour than sugar.”).

Board Games: (e.g., Trouble, Snakes and Ladders,

- Playing any board game is a fun way to practise counting together. Begin with one die, and once your child is comfortable, a second die could be added.

Games with Cards: (e.g., Go Fish)

- Playing games with cards also helps children to be able to recognize and name small numbers.

Websites:

There are so many great online resources to explore that are fun and free!



If you are on Twitter, *Math Before Bed* is a great one to follow! They regularly tweet prompts and resources for you and your child to discuss before bed or at any time!

Building Spatial Reasoning

“What is Spatial Reasoning?!”

Spatial reasoning (or thinking) is the location and movement of objects and ourselves in space. We use our spatial skills every day, and are essential in our daily life. It is when we give and follow instructions, cut food into equal sized pieces, build furniture from a diagram, and understand how far to throw a ball to a target.

These skills are seen as essential job skills for 21st century STEAM jobs – Science, Technology, Engineering, the Arts & Architecture, and Mathematics.



How can I help Build Spatial Awareness?

Spatial thinking can be practiced any time of day and happens naturally

during play!

Build!

Encourage your child to build with a variety of



objects. Building allows children to manipulate objects (e.g., fit different sizes and shapes). It could be as simple as stacking plastic cups, making a city out of recycled materials such as boxes, or building with toys

such as blocks, Duplo or Lego.

As they play, they begin to use spatial language (e.g., under, over, beside, in front). Pretend play builds their imagination and gives them a chance to practise the language they use everyday.

Play Outside!

When children play at the park, kick a soccer ball, ride a bike, or just dig in the sand, they are experiencing first-hand how their bodies move in the space around them. Sliding from the top



of the slide to the bottom, or trying to kick the ball into the net, helps them experience the different ways their bodies move and allows them

to understand what the spatial vocabulary 'feels' like.

Puzzles and Games!

Building a puzzle, moving the pieces, and turning the pieces are all actions that engage spatial sense and help children begin to visualize space. Asking questions like “What shape might fit here?” or “How can you turn it so it will fit?” encourages your child to make predictions, try it out, and problem solve. Online puzzles are a great rainy day activity!

Model Spatial Language!

For children, this language will include words to describe location, distance, and direction (e.g., left/right, over/under, above/below, middle, tall/short). Playing a game of “**Eye Spy**” and using spatial language while waiting for an appointment, or on a walk provides real context for using this language.

By incorporating these playful activities, it is possible to strengthen spatial thinking and set your child up for success in math for years to come!