



## Activities to Teach the 5 Strands of Math

<p><b>Number Sense and Numeration</b></p> <p>Numbers are used in counting, describing quantity, addition, subtraction, multiplication, division and combining them to solve problems</p>	<p>Things you can do with pre-Kindergarten and Kindergarten children:</p> <ul style="list-style-type: none"><li>• Practice counting objects to 5. Help your child count by pointing to and moving the object as they say each number out loud</li><li>• Estimate or guess the amount before counting. Fill a jar with an object or place them in your hand. Start with bigger objects like small balls or marshmallows. Ask "How many balls do you think are in the jar? <u>Eight</u>. Let's take them out and count them. You made a really close guess. There are 6 balls. You were only two away. Congratulations."</li><li>• Find numbers in your home or on the street where you walk, for example, books, advertisements, signs, telephone</li><li>• Show a number card (4) and ask child to find that many objects. Ask "How do you know that is 4?"</li><li>• Compare quantities of objects – "this pile has the same number as, or more than, or less than"</li><li>• Practise matching things up to 5 – "I see 3 children. I wonder how many chairs I need?" or "We have 5 plates for lunch. How many glasses do we need?"</li><li>• Say "Mommy has 2 legs, daddy has 2 legs and you have 2 legs. How many legs do we have altogether?"</li></ul>
<p><b>Measurement</b></p> <p>Measurement includes concepts such as length, width, height, area, mass (weight), volume, time, temperature</p>	<p>Things you can do with pre-Kindergarten and Kindergarten children:</p> <ul style="list-style-type: none"><li>• Line up cereal boxes or canned goods by height from tallest to shortest</li><li>• Teach the idea of longer than and shorter than. Ask "Can you find something longer than this shoe? Now find something shorter than this shoe."</li><li>• Use measurement language. Talk about tall/short, big/small, empty/full, heavy/light, tomorrow/today/yesterday, hot/cold, warm/cool</li><li>• Use things like blocks joined together to measure. You could measure the length of your arm "Wow, my arm is 20 blocks long. How long is your arm?"</li><li>• Compare and order items – "Let's put the drinking glasses in order from shortest to tallest."</li><li>• Measure time using an egg timer</li><li>• Keep track of the passage of time using pictures (getting out of bed, getting on the school bus, after school activity, etc.) Find pictures that depict daily events and use them to explain how the child's day will unfold. Children can sort them and put them in order</li></ul>



## Activities to Teach the 5 Strands of Math

### Geometry and Spatial Sense

Children require experience with 2 and 3 dimensional shapes, positions (beside, below), and movements (slide, flip) to prepare them for understanding the principles of geometry and spatial relationships

Things you can do with pre-Kindergarten and Kindergarten children:

- Look for shapes in the house and outside that have familiar shapes – circles, squares, triangles, rectangles. Ask “What shape is the TV, the chair seat, a yield sign?”
- Use shape stickers in a drawing – a rectangle is the trunk of the tree, circles are tires on a truck
- Build structures with different shaped blocks, cereal boxes and paper tubes
- Discuss each shape and things you notice – a square has 4 sides and 4 corners, circle has no sides
- Play a word game, using directions like up, down, under, between, through, on top of. You could say things like “I spy an object that is green and is behind the chair.” or “Go forward 5 steps, walk between the chair and the lamp and reach under the table to find your prize.”
- Work on puzzles. Puzzles are fun activities that deal with shapes (this piece has 2 straight sides), positions (this piece fits beside the yellow one) and movements (flip it over and it will fit here)

### Patterning and Algebra

We find patterns in nature, in designs, in music and in mathematics. Making and finding patterns helps children understand the other math strands

Simpler patterns are:

**red/blue/red/blue** or **red/red/blue, red/red/blue**

A more difficult pattern would look like this:

**red/blue/red, red/blue/red**

Things you can do with pre-Kindergarten and Kindergarten children:

- Point out patterns when you see them. “Look at the pattern in your shirt – red stripe, yellow stripe, red stripe, yellow stripe.”
- Find patterns in clothing, wallpaper, tiles, etc. Describe the pattern, and talk about the parts that are repeated
- Make a sound pattern – clap, clap, stomp, clap, clap stomp, clap, clap, stomp. Keep the pattern simple. Have your child repeat the pattern. Practice the pattern many times
- Make patterns with your children on the floor or table using coins, buttons, stickers, etc. Remember to keep the patterns simple and stick to one kind of object (all coins, old keys or stickers) in the pattern until they have had lots of practise
- Make a simple pattern from buttons and ask your child to keep repeating the same pattern
- Read books and poems that repeat lines and phrases in predictable ways helping children to recognize and predict the pattern of the words
- Sing songs that contain patterns – Mary had a little lamb, little lamb, little lamb. Its fleece was white as snow



## Activities to Teach the 5 Strands of Math

### Data Management and Probability

Data management is collecting and organizing information and then analyzing the information to see what it tells us  
Probability is about making predictions about the chance an event will occur

Things you can do with pre-Kindergarten and Kindergarten children:

- Give children a pile of different coins. Ask them to sort them into piles of pennies, nickels, etc. You can repeat this with buttons, old keys, shoes, etc.
- Ask children to sort a pile of objects and tell you their sorting rule "I put all the shiny buttons here and the buttons that are colored in this pile."
- Before you put the groceries away, try sorting them in different ways. – decide together if they are fridge or cupboard, fruit or meat, canned or fresh, snack or lunch food?
- Put some different things together on the floor (some toys, clothes and plates) and ask "which items go together?" Ask your child to put them in separate piles and tell you why they chose to put these things together
- Are there more sunny days than rainy days? Record daily weather on the calendar. At the end of the week or month make a picture graph showing how many sunny, cloudy, rainy days
- Flip a coin or role dice. Predict whether the coin will show a head or a tail when flipped
- In a cloth bag, place 3 blocks – 1 red, 2 blue. First have them guess which color they will get when they pull one out. Then ask child to reach in and pull out one block. Make a chart showing which colors were pulled out
- Play simple board games like bingo, concentration