

Mathematics in Early Childhood Education

As educators, the implementation of a Math based curriculum may be challenging, especially if you are talking about 3, 4 and 5 year olds still working on acquiring and managing their social skills. However, it may also represent a window of opportunity to embed mathematics in your curriculum and to enhance preschoolers' critical thinking. The National Council of Teachers of Mathematics specifies content areas that need to be covered in preschool: Numbers and Operations, Geometry and Spatial Sense, Measurement, Algebraic Thinking, and Data Analysis. In order for children to learn all these content areas, the following process' components are required: Problem Solving, Reasoning and Proof, Communication, Connections and Representations. If you need more information visit their website at:



<http://www.nctm.org/standards/default.aspx?id=58>

Previous childhood experiences influence or shape the way you react to simple quotidian functions that require mathematical skills, including the way you implement mathematics in your classroom. If you need strategies on how to enhance your students' critical thinking, here are some ideas you can try:

Availability: Add math invitational trays in all the areas, post charts, webs, and any other data analysis information around the classroom. Make math opportunities part of your daily routine.

Implementation: Teach one concept at a time, connect concepts to the real world, follow the child's interest and ask open ended questions.

Extended Facilitation: Generalize concepts to other areas, extend and represent children's ideas, help them to make connections and communicate the results.

Let's focus on one content area- Geometry and Spatial Sense include these components:

- Shapes (two and three dimensional shapes)
- Space (near, under, by, on top, right)
- Transformation (new position, flipping, turning, combining)
- Visualization (Represent them after seeing them)

If you need help planning activities that support Geometry, visit my website for a list of vocabulary you can introduce while facilitating an activity. Also visit my Facebook page <https://www.facebook.com/ruizmaSTEAM> to watch videos of activities that supports a variety of mathematical concepts.