

Math in Early Childhood Classrooms

Resources and Strategies

Florida Early Learning and Developmental Standards:

Number Sense

- One-to-one correspondence
- Counting
- Comparing equal, more, less
- Ordinal positions

Number Operations

- Combine and remove from sets
- Solves problems with objects
- Separates sets into groups

Patterns & Seriation

- Recognizes, duplicates patterns
- Produces patterns with two elements
- Sorts, orders, compares objects

Geometry

- Sorts shapes
- Constructs shapes
- Identifies number of sides
- Names two and three dimensional shapes

Spatial Relations

- Uses position words
- Describes positions of objects
- Uses orientation – diagonal, vertical, horizontal

Measurement

- Compares length, weight, height with terms shorter, longer, etc.
- Collects and sorts materials for graphing
- Interprets graphs during group work

What Does Research Say about Child Development and Math Instruction?

- Most 3-yr olds have difficulty comparing “which set has more”. They think that a set that has objects spread out has “more” than if objects are close together.
- 4-yr olds are able to understand subtraction (making a set have fewer) before they understand addition. It’s easier to visually understand that items are “taken away” and that there are now “fewer.”
- Children cannot develop ideas about shapes from only looking, they must manipulate shapes in a variety of ways.
- Math is best learned through manipulation of objects instead of by rote.
- Children can think of what “how many” objects look like up to 5 without having the objects in view.
- Natural conversations about math concepts are vital for helping children remember and extend their thinking about math. Language and vocabulary are important factors in math.
- Children learn and understand math concepts better when they learn through the use of familiar everyday objects.
- Comparison studies show that children who are taught math using a “playful approach” are more successful.

Helpful Resources for Math-related Books

The Best Children's Books

<http://www.the-best-childrens-books.org>

- Lists of books organized by category of concepts
- Two sample pages from each selected book
- Lesson and activity ideas

Pre-K Pages

<https://www.pre-kpages.com/math-picture-books-for-preschool/>

- Books arranged by concepts with brief descriptions
- Books that are related to center play activities

Reading A-Z

<https://www.readinga-z.com/worldlanguages/spanish/math-books/>

- Translations of popular classroom children's math books into Spanish (sometimes French and Vietnamese by request)
- The site includes translations of popular songs and rhymes

Math in Songs and Rhymes

Bus Songs

<http://bussongs.com/counting-songs.php>

Each song title links to a colorful cartoon video.

Spanish Playground

Counting songs in Spanish

<http://www.spanishplayground.net/5-spanish-counting-songs-preschoolers>

Super Simple Songs

<https://www.youtube.com/playlist?list=PL028565C616627F50>

Each song is about 3 minutes long and most have videos.

The Educators' Spin On It

<https://theeducatorsspinonit.com/category/math>

STEM activities for various grades and subjects. Select Preschool from the menu and then search for the topic. Subscription is required for downloading but there is no cost.