Math Materials and Activities

During the early childhood years, children are developing their understanding of quantity, size, and shape. The most successful way to encourage this development is to talk about numbers with the children, to make it important for them, and to tie many interesting, engaging experiences with real things to number words and concepts. To begin to understand math, and to build the foundation for later abstract mathematical learning, preschoolers need many hands-on opportunities to explore quantity, size, and shape.

Developmentally appropriate math materials and activities match a child's abilities and interests. The materials and activities should be neither too difficult not too easy. They should challenge the child's current math ability.

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TN ELDS Guiding Principles: Children are active and eager learners. A primary approach to learning is through purposeful, meaningful play. Intentional planning promotes rich learning experiences that invites participation, involve multiple contexts, and engage the sense which help children explore their environment.

Head Start ELOF: Teaching must be intentional and focused on how children learn and grow.

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5.1 At least 10 different appropriate math materials, with at least 3 from each of the 3 categories listed, are accessible for at least1 hour during the observation.

1) Counting/comparing quantities

- Unifix cubes and number try
- -Bears and dice
- -Chart/graph with number

2) Measuring/comparing size and parts of whole

-measuring cups (located in the sand and water box)

-Balance scale with things to weigh

-ruler w/ inch worms

-tape measure

3) Familiarity with shapes

-puzzle with different geometric shapes

-unit blocks (located in the block center)

-Magnetic tiles

-shape puzzle

5.2 Staff frequently join in children's play with math materials (Ex. Ask questions; respond to children's questions, show enthusiasm; teach children to use materials.)

5.4 Staff encourage use of math materials/activities and help children use them successfully

7.2 Staff ask children questions about math materials/activities that stimulate reasoning.

Understanding written numbers

In high-quality early childhood programs, our emphasis must be to help children make the connection between a symbol and the quantity it represents. This is less likely to happen if staff do not provide plenty of these types of activities and interactions. Children experience math ideas as they play, think, and talk about math in a way that is meaningful. Print numbers, in themselves, carry no meaning until they can be associated to something children can understand. This item requires that written numbers are represented in many of the display and play materials and that those numbers are related to the quantities they represent.





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3.1 Some print numbers in display materials are accompanied by pictures that shows what the number means.

-signs for number of children allowed in center

3.2 Some play materials with numbers are accessible during the observation

-toaster

-money

-stove

3.3 When children play with materials credited in 3.2, staff sometimes point out the numbers and talk about then in a way that interests children.

5.1 At least 3 different play materials that help show children the meaning of print numbers are accessible during the observation

- Puzzle with number on one piece

-Counting books

-Counting/sort fruits with cupcake baking sheet

5.3 Staff show children how to use materials and talk about the meaning of printed numbers (Ex: count objects with child and read the number; use "first, second, third" as child uses printed number sequence; point out numbers on rulers or thermometers, showing how they indicate differences in size or amount).