Coach's Corner

Math in Early Childhood Education

The opportunities for learning are endless during the first 5 years of a child's life. As educators, we are privileged to have a front seat to so many of these opportunities. Think about the activities you do in your program or classroom to foster skill development. What types of skills do you focus on, social emotional skills, language and literacy, fine motor skills? What about math? Math is often misunderstood in the early childhood classroom. Some educators may feel that the children in their care are not ready to learn math concepts, while others may only be looking at concepts such as counting or shape recognition. Some educators may not feel confident in math themselves. Relax! There are so many opportunities to help educators feel more comfortable introducing math concepts in the early childhood classroom, including activity ideas and training, and we are here to help you get started!

One of the most important tasks is to make math interesting for children. Much like literacy, early math concepts are best learned by hands-on activities. Numbers become more meaningful to children when we are using them in their environment rather than just pointing to them on a chart or poster. There are many opportunities throughout the day during both free play and routine times to do this. Think about mealtimes. Educators can have children count out the number of plates or utensils needed for lunch. If you are serving crackers or cookies for a snack, talk about their shapes. During free play, use different color connecting toys to make patterns with the children, or put groups of blocks or cars together and have children point out which group has "more" and which group has "less". These types of interactions are meaningful to children because they pertain to an important part of their day. Let's take a look at math concepts for different ages.

DIEEC offers a few trainings on math in the early childhood classroom. Be sure to check out the training calendar for upcoming dates!

Infants and Toddlers

Infants and toddlers are constantly learning about the world around them. They are naturally curious about their environment. Educators can incorporate math readiness using materials in which the babies or toddlers are already interested. There are many opportunities throughout the day to work on these skills. If a baby is clapping their hands or kicking their feet, an educator can help them to count their hands or feet. If a toddler is playing in the block area, help them to recognize the different shapes of the blocks.

Counting and shape recognition are the more obvious math skills, but we cannot forget about measurement, classification, and patterns. Think about comparing the sizes of different toys by talking about big vs. small. We can teach classification and patterns by sorting toys or materials by color or creating patterns with them. At this age, educators will need to do a lot of talking and modeling to provide examples. The most important thing is to make it fun and interesting! We want our little ones to be excited about learning new things!

Preschoolers

For preschool children, educators can also work on math concepts using materials that already spark their interest. If a child is building in the block area, ask them if they can count how many blocks they are using. Ask if they can create patterns using cars or sort animals into categories. At this age it is important to start planning math activities. These can be done with children individually, in small groups, or even put out as activities to choose during free play. Below are some examples.

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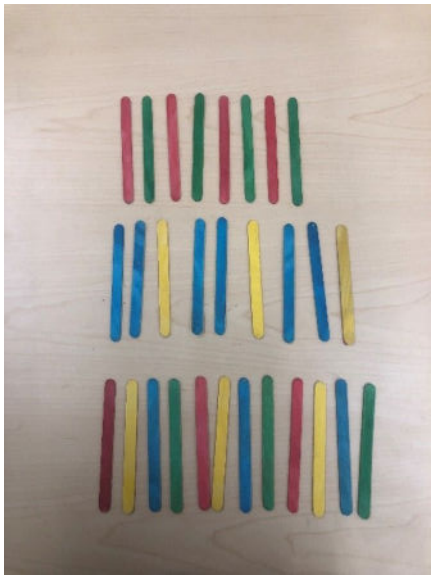
CLOTHESPIN NUMBER MATCH

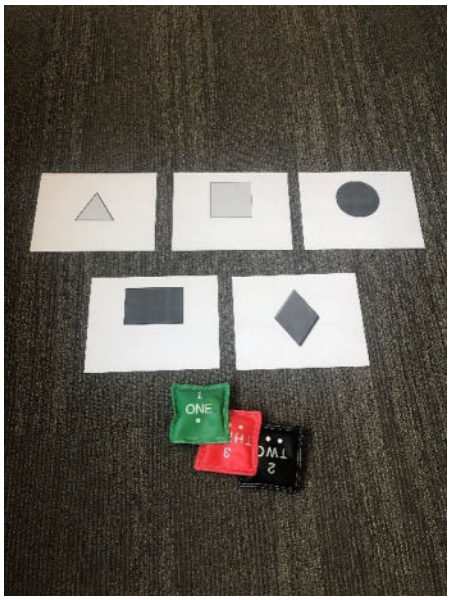
Children can match the number on the clothespin to the number of dots on the circle.

CLOTHESPIN NUMBER MATCH

Write numbers 1-10 on cardboard tubes. Have children put the correct number of craft sticks in each tube.



CREATING PATTERNS WITH CRAFT STICKS



SHAPE BEAN BAG TOSS

Call out different shapes and have children toss the bean bag onto the shape. To add some difficulty, name items in the room such as a clock and have them figure out which shape to throw the bean bag on.

One-to-One Correspondence

Invite children to help set a table in dramatic play. Talk to them about setting one work with each plate. You can also have them add a napkin and a cup with each place setting.

Interest Areas

Invite children to help set a table in dramatic play. Talk to them about setting one work with each plate. You can also have them add a napkin and a cup with each place setting.

- **Block area-** Add some rulers for children to measure their block structures. Add some paper and crayons so that they can trace the shape of the blocks and make a "blueprint" before building their structure.

- **Dramatic play-** Add a cash register and some play money for the children to use while playing store or restaurant. This is a great way for them to count using play money

- **Fine motor**- Many math materials can also serve as fine motor materials. Think about adding a shape puzzle or a shape sorter. Magnetic building shapes are also a popular crossover material (Bonus- they also count for science!).

- **Art-** Add some shape stencils (Bonus-this will also count as fine motor!). Also, encourage the children to make shapes when they are playing with play dough.

- **Library-** Think about adding books about math concepts to your bookshelf. Here are a few examples:

    - Chicka, Chicka, 1, 2, 3 By: Bill Martin Jr. And Michael Sampson
    - Ten Little Ladybugs By: Melanie Gerth
    - Feast for Ten By: Cathryn Falwell
    - Mouse Shapes By: Ellen Stoll Walsh

These are just a few ideas to help educators to be intentional about using math in early childhood programs. In addition, DIEEC offers a few trainings on math in the early childhood classroom. Check the training calendar for the following courses:

- Everyday Math PLUS- includes follow-up coaching!
- Math 1,2,3: Understanding Children's Math Development