Early Learning Areas / **Mathematics**

Everyday Math

Dear Elizabeth,

My twins love to count when I'm putting groceries away. Are there other everyday activities that I can use to introduce math?

– **Alicia Jimenez**

Elizabeth's Tips

Elizabeth Sanchez
Host

- Talk about math in everyday experiences
- Provide concrete materials
- Ask open-ended questions

Expert Advice

Tisha Rivera
Early education instructor

Introducing Math

There are many math concepts that even very young children can learn. Each concept has infinite learning possibilities that can be introduced through simple, yet significant learning activities, such as:

- Classifying and sorting (by size, color, shape, etc.)
- Seriating and sizes (organizing in rows, lengths, etc.)
- Number sense and Counting principles (counting, sets, knowing the last number is the total, …)
- Matching (by any characteristic imaginable)
- Comparing and Contrasting (individual items or groups of items on many characteristics)
- Organization skills (which are correlated with IQ)

Materials

Children can learn math concepts in their everyday activities without any materials. For instance, if they are standing in line waiting to go outside, child care providers can ask children who are wearing blue to go to the front of the line or children who have zippers to use another door.

In addition, when a parent is at home making sandwiches for the family, he or she can ask the child to tell him or her how many slices of bread will be needed for the family of

four. Then, cut the sandwiches in half and ask how many slices there are now.

Setting up a math-enriching environment via the materials we provide is also important. There are many different materials that are appropriate for teaching young children math. For example:

- Music (movement activities) that involve numbers, counting, etc.
- Books that have rhyme, repetition, or numbers
- Puzzles to teach shapes, colors, numbers
- Board games—counting, numbers, order, sequence, etc.
- Card games-numbers, matching, recognizing patterns, etc.
- Art materials—paints, colors and other media with stamps of shapes, etc.
- Crafts—stringing beads or cereal through shoelaces or yarn for example to create patterns
- Dramatic Play—endless learning possibilities in playing dress-up, roles, etc.
- A feel and find bag (where differently-shaped objects are placed and children guess by feeling)

In addition to providing materials, it is important to remember to provide ample time for children to explore and learn from these materials and activities. We should also provide support to help children gain the most from their learning experiences—be available to assist if needed and ask questions to help them expand their knowledge.

Also, keep in mind children's developmental levels and their temperament. Recognize their tolerance levels (are they getting bored or frustrated?) and intervene as appropriate or necessary.

Everyday Experiences

It's best to introduce math to kids through their everyday experiences. Children learn about the world and life through their daily interactions with people and objects (using their social and physical worlds). Parents can engage children in conversations about things such as the shapes of their breakfast cereal or the leaves on the trees, and pointing out colors. Children can do simple activities such as going on a shape or color hunt, counting their body parts, cleaning up their play area and sorting/organizing materials appropriately. Cooking is another enriching math experience (measuring, counting, colors, types, etc). Even doing laundry can teach math concepts—by sorting colors, by types of clothing, or counting socks. There are countless activities that we perform throughout the day that can benefit children's learning of math concepts.

Introduce Math Early

Research has taught us that even babies as young as seven months old possess fundamental numerical abilities (by pairing the number of voices they hear with the faces they see)! The brains of young children are organized for learning these concepts. It is easier for children to excel in math during their school years if the foundation is laid down early in their development. Later in school and in life, children will need to know math to learn other subjects like science, social studies, and basic life skills. Thus, it is vital to set the groundwork for future math learning at an early age.

Ask Questions

It is important for adults to find out what children already know and then build on that knowledge. Observe children in their play and daily activities and you'll notice that they have already become aware of and use math concepts regularly. For example, a young child might be eating with a playmate and say something like, "Eddie has more crackers than I do!" Or he might be coloring and state, "all of the blue crayons are broken!" Follow their lead and move at their pace. You might say something like—"Are you sure Eddie has more crackers? Let's count his and yours to be sure" (counting and comparing are being utilized). Continue the conversation and use it as a teachable moment. For example:

- Ask them to figure out why something is the way it is. How do you think that happened?
- Tell me what we could do about it. (encourage problem-solving)
- Is there anything else we might be able to do? (prod to gain further knowledge)
- Then follow up and review. Ask more questions to clarify, then expand on their knowledge to introduce new learning

When Parents Are Intimidated by Math

It's true that a lot of adults are really intimidated by math in general. However, it is really important that we portray a positive attitude toward math so that our children can mirror this attitude. First of all, parents can realize that math is a part of children's everyday experiences.

Young children are going to learn math concepts while learning to interact with their physical and social worlds not by having formal, sit down lessons as older children do. Parents can observe their children and ask them questions. They will find that oftentimes children will teach them, rather than vice-versa.

If parents become aware that children's use of math to solve problems helps them to develop curiosity, imagination, flexibility, persistence, independence, and real-life problem-solving skills, they might be more enthusiastic in their approach to math.

Child Care Provider Comments

Archana Sunil
Mother of two

Groceries are the best way to introduce math for us. It starts at the grocery store and continues at home as we put the groceries away. In fact, grocery shopping takes double the time with my 2-year-old because he gets so involved. Different items are in different sizes, shapes and colors. If I buy pasta, I'll ask my kids to sort it into various containers by colors. I talk to my kids a lot about math concepts and try to engage them in conversation.

Silvia Fischer
Grandmother of 20-month-old

I encourage my grandson to be bilingual so we have him count in English and Spanish. I bought a place mat for him and it has different animals and foods on it. He is now able to recognize things and count how many he sees. He counts everything he sees when we drive home. He counts the fire engines, the ambulances and even the mail carrier trucks.

We cook together twice a week which is a great way to introduce math concepts. We count the number of ingredients that go into a recipe, we talk about measurement, such

Ashlee Durr

Cares for her niece and nephews

as if something is empty, full or half-full. We also take advantage of neighborhood walks to count things like flowers, cars, stop signs, etc. We also talk about differences in the sizes, shapes and colors of things.

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