



# Quality ChildCare

## For Registered Home-Based Providers

LEARNING TO GROW ★ WINDWARD COMMUNITY COLLEGE

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### 10 Hallmarks of Quality Child Care

- ★ Build trusting relationships
- ★ Provide consistent care
- ★ Support children's health
- ★ Provide a safe environment
- ★ Provide positive guidance
- ★ Provide a language-rich environment
- ★ **Foster curiosity and development through play**
- ★ Individualize care and learning activities
- ★ Partner with parents
- ★ Pursue personal and professional growth

### This Month's Hallmark of Quality Child Care

#### Foster Curiosity and Development through Play

## Math in Everyday Activities

According to Zero to Three, learning about math starts as early as infancy. Young children naturally develop math skills through play and interactions with their environment. They develop math skills that include number sense, shape recognition, patterns, sorting, and measurement. This newsletter will focus on three of these skills:

- **Number sense** – understanding what numbers mean,
- **Shape recognition** – identifying, naming, and describing different shapes by their attributes, and
- **Sorting** – identifying similarities and differences among a set of objects and grouping them accordingly based on their characteristics.

These skills build upon each other, starting with concepts like more and less (choosing the bowl with more cereal) and building to more complex skills such as comparing the attributes between objects (e.g., Cheerios are round like the ring-shaped pasta).

You can support children's understanding of math concepts through everyday routines. Opportunities such as setting up for mealtime allow children to count the utensils for each person (number sense), gather square or circle-shaped plates for each person (shape recognition), and identify the utensils to use for meals such as forks or spoons (sorting). During these times, point out the math skills by talking with your children to emphasize the learning. For example, "How many napkins do we need? Four? One for each of us? Let's put four on the table...one, two, three, four." The foundational skills they gain from their daily routines prepare them for more complex math concepts in their later years.

In this newsletter, we will share ideas to help infants, toddlers, and preschoolers develop number sense, shape recognition, and sorting skills through everyday routine activities.





# Number Sense

Number sense allows children to understand and talk about numbers. Children begin to display their understanding of math concepts from infancy as they reach for objects, show a preference for quantities based on their perception, and count items they are playing with.

According to the Centers for Disease Control and Prevention's (CDC) Milestone Tracker, by age 5, children should be able to count to 10 and name some numbers between 1 and 5 when you point to them. You can help keiki build their number sense skills by talking about numbers, focusing on one-to-one correspondence, and recognizing quantity in real-world contexts. You can do this by:

- **Infants** – Talking about numbers when washing hands. For example, “We are washing your two hands. 1 and 2. Wash your fingers... 1, 2, 3, 4, and 5!”
- **Toddlers** – Turning clean-up time into a counting game. For example, “Can you help me find the cars on the floor? 1, 2, 3, 4, and 5. You found 5 cars.”
- **Preschoolers** – Reading a counting book, then pointing out numbers and finding the objects that match that number. For example, point to the number 5 and say, “There are 5 ducks in the pond. Let’s count them. 1, 2, 3, 4, and 5.” Point at the number 5 again and say, “We counted 5 ducks.”



# Shape Recognition

Shape recognition helps children understand how objects look and fit together in their environment. They learn about shapes by seeing, touching, and manipulating objects around them. For example, infants like to mouth objects, toddlers like to put puzzles together, and preschoolers like to identify and name shapes.

You can help keiki build their shape recognition by having toys and materials that they can play with, such as shape sorters and puzzles, and talking about shapes in everyday contexts. You can do this by:

- **Infants** – Pointing out shapes of foods. For example, “The peas are round like your ball. The carrots are the same square shape as this block that you were building with.”
- **Toddlers** – Letting them pick out food items by their shape. For example, “Can you help me get a round fruit? An orange is perfect, “I am slicing the eggplant and look at all these circles I made.”
- **Preschoolers** – Creating opportunities to have them identify and describe shapes. For example, “I need your help finding the blocks and putting them back in the matching spot on the shelf. Do you see the triangle? How did you know this one was the triangle? Yes, the triangle has 3 sides and the square has four sides.”



# Sorting

Sorting is a foundational math skill that helps children make sense of the world by organizing information. They utilize this skill to assist them as they go about their everyday routine. For example, infants start to recognize the differences between objects and people. Toddlers can identify similarities and differences between objects based on attributes such as color, size, and shape, and can group them accordingly. As they compare small groups of objects, they recognize which one has more or less. Preschoolers continue to learn about how items are similar or different, and begin to sort them by more than one attribute (e.g., these buttons are all the same color and shape).

As children interact with a variety of toys and materials in your program, it is important to have them talk about what they are doing. Questions such as “Why do these things go together?” or “What do all these things have in common?” help prompt them to find similarities between objects. They may tell you about the size, color, or something surprising, like that they are all their favorite things!

Provide children opportunities to develop classification skills in everyday activities by:

- **Infants** – Helping them notice things that are the same or different during mealtime.



For example, “I see you put the pea from your hand back on the plate with the other peas. Peas aren’t your favorite. But you ate all your carrots.”

- **Toddlers** – Inviting them to help sort the books after story time. Emphasize specific attributes for the child to focus on, such as soft books vs. board books. You can say, “The soft book goes in the basket with the other soft toys for the baby. This board book is hard and goes on the bookshelf.” Give time between each request for the child to put the book where you asked him to.
- **Preschoolers** – Preparing a snack for the group and inviting them to sort it into different categories. For example, crackers of assorted shapes and/or sizes.

## Training Opportunity

### *Playful Math Instruction*

The webinar will help you learn the importance of early math instruction, the value of planned, purposeful instruction, and effective developmentally appropriate teaching strategies.

<https://earlychildhoodwebinars.com/webinar/playful-math-instruction-deborah-stipek>



# Featured Activity

## Count with Paper Towel Tubes



### What you need:

- 3 or more recycled paper towel tubes

### What to Do:

1. Invite the child to use recycled paper towel tubes to measure things around the home.
2. Ask the child to guess how many tubes it will take to measure the item. For example, you can ask, "How many tubes tall is the table?" "Let's measure it, starting from the bottom and measure all the way to the top." "Let's count, 1, 2, 3 paper towel tubes..."
3. Help the child confirm his guess by counting and measuring together.

## Citations

*Best Children's Books for Early Math Learning | Early Math Collaborative.* (2021, September 16). Erikson Institute Early Math Collaborative. <https://earlymath.erikson.edu/the-best-childrens-books-for-early-math-learning/>

NAEYC. (n.d.). *Math Talk with Infants and Toddlers | NAEYC.* [Www.naeyc.org.](https://www.naeyc.org/) <https://www.naeyc.org/our-work/families/math-talk-infants-and-toddlers>

## Suggested Books

Discover these books and more at the Hawai'i State Public Library [www.librarieshawaii.org](http://www.librarieshawaii.org)

### Infants and Toddlers

#### *1, 2, 3 to the Zoo*

by Eric Carle

A fun and playful counting book. Children will enjoy counting the animals going to the zoo, from one elephant to 10 birds.



#### *Quack and Count*

by Keith Baker

A family of seven ducklings slip, slide, leap, and dive as they get ready to fly for the first time—playful and rhyming text to introduce counting.

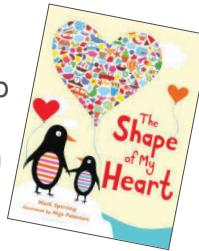


### Preschoolers

#### *The Shape of My Heart*

by Mark Sperring

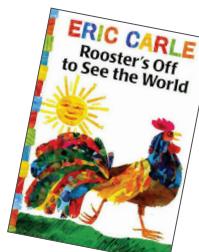
The world is alive with endless shapes to identify – from sunup to sundown, hands to feet, animals, cars, and treats. A fun book to introduce shapes all around us.



#### *Rooster's Off to See the World*

by Eric Carle

Rooster sets off to see the world. Along the way, he met two cats, then three frogs, then four turtles, then five fish – A simple introduction to number sets, addition, and subtraction.



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