



CENTER ON THE FAMILY ♥ UNIVERSITY OF HAWAI'I

# **Brain Development**

The first five years of a child's life is a period of profound brain growth and development. According to Zero to Three, 90% of a child's brain development takes place during this time. The positive care, love, and interactions you provide her at this stage lay a foundation for building trust and emotional security which are crucial for healthy brain development.

Daily interactions with your child provide the stimulation she needs for healthy development! The following are some simple examples of what you can do to support your child's brain development.

- Talk with and engage her in "conversations" from the time she is an infant — for example, talk about the colors, taste, and textures of foods that are being prepared or served, about how the water feels during her bath time, or about the toys she is playing with. Remember to pay attention and allow enough time for her response.
- Read with your child daily, again starting when she is an infant, making it a routine, for example before naptime or bedtime.



Sing songs and do finger-play or movements while singing.

This newsletter will focus on daily interactions that you can have with your child to support her brain development. Age appropriate activities for infants, toddlers, and preschoolers are also included.



## **In This Newsletter:**

To support you in fostering your child's healthy development and school readiness, this newsletter includes:

- Age-specific information and suggestions about activities to do with your infant, toddler, or preschooler,
- Featured activities for each age group,
- How This Helps: a summary of your child's development by doing these activities together,
- Community Resources: for more information, and
- Suggested Books: a list of books to read with your child.

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## **Infants**

Although babies cannot yet communicate with words, a large part of their early brain development occurs as a result of their early interactions and "conversations" with their caregivers, and exploration of the world around them. You help your baby grow and develop by engaging her in daily routines, and providing her with safe opportunities to explore her environment.

Talk to your baby while changing her diaper; touch and count her toes out loud. Describe the feeling she may be expressing, e.g., "Are you hungry?" "You look happy." Point to and name





objects or pictures. Ask questions while reading her a book or while on an outing. Encourage her to touch different objects while you describe how they look or feel. These types of interactions collectively contributes to her emotional, physical, and language development, and are linked to healthy brain development. Below you will find a simple activity you can do to capture your infant's attention and interest. This, like many other activities you do with your child, will help your child learn and grow.

## **Activity for Infants: Pictures and Mobiles**

#### Materials:

Pictures or posters to hang on the wall A mobile for your baby's crib

#### What to Do:

- 1. Place pictures or posters on the wall next to your baby's crib, or hang a mobile over the crib but out of your baby's reach.
- Point to things in the poster or mobile and talk about them.
  For example, "Look at the rainbow. There are so many colors. I see red, yellow, and blue."
- 3. Blow on the mobile to make it move and watch your baby's reaction. Talk about what happens. For example, "I can see the colors moving around."
- 4. Change the pictures or posters every now and then so she has different things to look at.

**Safety Alert:** Keep mobiles out of your baby's reach to prevent her from getting tangled in the cords or pulling off small objects that could cause choking when swallowed.

(See page 5 for information on how doing these kinds of activities with your child helps her development and school readiness.)







## **Toddlers**

Because of their increased mobility, toddlers are more active in exploring the world around them. They crave interactive (hands-on) learning, conversing and talking with others, and listening to stories. At this age they are also experiencing a language explosion, and are learning and starting to use more words. There is a lot they want to say, but they still haven't fully developed the language skills necessary to convey their thoughts.

Exposing your toddler to a variety of books will assist her in developing her language and early pre-reading skills. Have books readily accessible and read aloud to her daily. As you read together, your toddler not only gets to spend time with you, she also learns to listen, builds her vocabulary, and gains an understanding of how books and print work. She learns that reading is fun! When you ask her questions or do other activities related to the book's content, you encourage her curiosity and problem solving.

These types of interactions provide the continuing stimulation needed for healthy growth and brain development.





#### Materials:

Resealable sandwich-size plastic bags Flat objects that fit in the resealable bags, e.g., pictures, ribbon, dried leaves Cloth tape or strapping tape

#### What to Do:

- 1. Have your child gather flat objects from around the home or in the neighborhood.
- 2. Talk about each object she gathers, e.g., what it is, how it feels, or what it is used for.
- 3. Put each object in separate plastic bag and seal it.
- 4. Stack the filled bags with the resealable side facing the same direction.
- 5. On the resealable side, tape bags together with tape to hold the book together.
- 6. Sit together and talk about what she sees and feels in each bag, for example, "This is a leaf from a mango tree."

**Safety Alert:** Do not let your child play with a small object (small enough to fit through a toilet paper roll) or put it in her mouth. Also, keep plastic bags that are big enough to cover her face or head away from her.

(See page 5 for information on how doing these kinds of activities with your child helps her development and school readiness.)

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## **Preschoolers**

Preschool-age children are increasingly intentional in seeking new knowledge and experiences. As their brain continues to develop, they exhibit more complex thinking skills than younger children, and can generalize learning from one situation to another. For example, a child may find that when she mixes blue and yellow paint together, the color turns to green. Having learned this concept, if she wants green play-dough, she knows she can mix blue and yellow play-dough together.

Preschoolers are starting to understand more complex concepts, such as counting and simple adding and subtracting of objects. Like infants and toddlers, preschoolers continue to learn through their interactions with others. Knowing this, you can find fun ways to turn daily household routines

into interactive games. Below is an example of how you can turn your vegetable prep time into a counting game with your preschooler. This simple game is another example of how you can use everyday opportunities to stimulate healthy brain development.



## **Activities for Preschoolers: Frog Friends Counting Game**

#### Materials:

Four pieces of celery or another green vegetable such as cucumber Bowl of lightly salted water

#### What to Do:

- 1. Invite your child to pretend that a piece of celery is a frog and the bowl of salted water is a pond.
- 2. As your child holds a piece of the celery on the rim of the bowl, tell a story about a lonesome frog beside a pond that wanted a friend to play with him.
- 3. Explain that some frog friends come to visit. Add one friend, then two friends, and finally three friends, holding up an additional piece of celery each time. Ask, "How many frogs are there now?" and count the celery sticks with her.
- 4. Continue your story by saying "There was a big noise and all the frogs jumped into the pond." Drop all the pieces of celery in the bowl. Ask your child how many frogs are left on land (outside the bowl). If she needs help answering, use terms like "none" or "zero."
- 5. Add variations to your story, such as, "The frogs came out of the pond, one by one, and disappeared." Show her how to make one frog disappear by eating the celery.
- 6. Ask, "How many are left now?" Together, count the number of celery pieces that are left. Then, describe how you get a different number when you subtract (take away) one from the total. For example, "If you subtract (take away) one frog, you have three left. One subtracted from four is three."

(See page 5 for information on how doing these kinds of activities with your child helps her development and school readiness.)

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# **How This Helps**

The activities suggested in this newsletter help promote many different aspects of development:

## **Physical Development**

- Use and strengthen small muscles such as facial muscles, fingers, hands, and toes
- Develop eye-hand coordination

## **Social and Emotional Development**

- Develop a close bond with you
- Learn to interact and cooperate with others

## **Language and Literacy Development**

- Connect words and sounds they hear with what they experience
- Develop early reading skills and a love of reading

## **Cognitive Development**

- Build math vocabulary
- Develop her creativity and imagination

# **Kids in the Kitchen**

Cooking also teaches valuable lessons. As you do this recipe with your child, show her how to safely handle the items and allow her to do as much as she is capable of. Ask questions throughout the process to encourage her thinking skills. Make sure to wash your hands and your child's hands before and after preparing any food.

### **Pizza Balls**

Adapted from: www.pillsbury.com/recipes

#### Ingredients:

1 canned refrigerated biscuits (10 count)

Pepperoni slices

½ block mozzarella cheese, sliced into 2" squares

1 beaten egg white

Mixture of 1 teaspoon parmesan cheese, garlic powder, and Italian seasonings

1 jar spaghetti sauce

#### Instructions:

- 1. Preheat oven to 425°F and grease a 9"x13" baking pan or cooking sheet.
- 2. Have your child help flatten the biscuits, pushing the tops gently.
- 3. Together, stack two slices of pepperoni and one cheese square on top of the biscuit. Count as you add each ingredient and ask questions such as, "What comes next?"
- 4. Fold the edges of each biscuit to the center and gently pinch them together to seal into a ball. Talk about what you are doing. Say, "We're folding the edges to the middle and now the biscuit looks like a round ball."
- 5. Place the ball, seam side down on the pan and brush the tops with egg white.
- 6. Have your child sprinkle the mixture of seasonings on each biscuit.
- 7. Bake for 18–20 minutes. As it's baking, talk about how the biscuits will change and make predictions on how it will taste.

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8. Serve with warm spaghetti sauce.







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### **CENTER ON THE FAMILY ♥ UNIVERSITY OF HAWAI'I**

# **Community Resources**

**Child & Family WebGuide** http://www.cfw. tufts.edu/ provides free parenting resource materials. On the homepage, click on the "Child Development" tab and browse the topics for helpful materials.

**Reading is Fundamental** www.rif.org/literacy-resources has fun activities, booklists, and other resources to help support your child's efforts in learning to read.



# **Suggested Books**

Recommended by **Read to Me International** www.readtomeintl.org. For more books, visit the public library www.librarieshawaii.org.



### **Infants and Toddlers**

### **Baby Animals** by Priddly Book

This read-aloud, touch-and-feel board book with rhyming text will help stimulate baby's emerging language skills. Parents also get to introduce various adorable animals that are sure to appeal to baby's senses of hearing and touch.

## Where Is Baby's Belly Button? by Karen Katz

This colorful lift-the-flap book introduces baby to his/her body parts. By lifting the flaps, baby learns where eyes, mouth, belly button, feet, and hands are. The surprise element of lifting the flaps only adds to the pleasant discoveries.

### **Preschoolers**

## My First Songs by Tomie dePaola

Through rhyme, rhythm, and repetition, this collection of ten songs, charmingly illustrated by Tomie dePaola, will help children develop language and other skills needed by beginning readers.

### Why? By Lila Prap

Preschoolers will love this silly book, which asks questions about various animals. Along with the real answers to the questions, there are obviously silly, incorrect answers that will amuse the children and hold their attention from beginning to end.

Learning to Grow is a project of the Center on the Family at the University of Hawai'i, College of Tropical Agriculture & Human Resources, with funding from the Hawai'i Department of Human Services. www.learningtogrowhawaii.org



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