



By Karen Stephens

# Beyond Brain Basics: Boosting Children's Learning Potential

Parents have ringside seats to the most fascinating show around: watching the mysteries of the young brain unfold and blossom. During early childhood, the brain is primed by nature for learning. Research suggests sure-fire ways to build good brain development. Some are so simple, you won't believe it. Research shows that over the ages, many of parents' natural childrearing instincts have been right on target. You don't need a lot of fancy, high-tech, over-priced toys to stimulate young minds.

The foundation for all brain development begins with good health and nutrition. A child's strong, secure attachment to parents and daily caregivers makes a big difference, too. With those critical bases covered, there's even more we can do to create a fertile environment for brain growth. Every parent can do it. Read on; you'll see.

## **Engage in frequent, mutually enjoyable touch and non-verbal communication.**

Touch can help children focus and become alert. It relaxes them so they feel secure to explore. Be responsive to touches your child prefers; it helps them learn they can communicate with others. It builds a sense of competence and power, too.

## **Wrap your child in a blanket of caring, meaningful, and responsive language.**

The brain is designed — hard-wired as some call it — to learn a language system. Children's native language becomes dominant since they experience it the most. Speak with children, not just at them. When feeding, diapering, bathing, or playing, respond to infant's pre-language "conversations." Talk to them about what they see and touch. Use facial expressions to hold baby's attention and to convey meaning.

## **Children learn best through engaged play.**

Children excel at learning by doing. They need hands-on interaction to investigate and explore. Children enjoy problem solving and observing cause and effect. Babies are amazed they can swat at a hanging ball and make it swing. Preschoolers are fascinated to find some things float in water and others sink. Exploring through trial and error is very motivating. Passive, less interactive experiences, such as long hours of daily television and computer play, are NOT effective at nurturing learning.

Pretend play, social or solitary, helps children think symbolically and abstractly. Both are complex skills that require lots of practice. Such skills emerge when children play with dress up clothes and props, blocks with accessories like trains, dolls, and playhouse furniture, doll houses and accessories, puppets, construction toys and toy people, farm toys with animals and equipment, and so on.

## **A variety of sensory experiences build learning pathways.**

When I was a child, my mother and I had a ritual we religiously followed every time we made cookies. Before adding the vanilla, we each took a deep whiff and savored it. Turns out, mom was brain smart. Stimulating children's senses increases learning. Sensory experiences are also more easily remembered. As I'm sure you've noticed, kids are big into touching and tasting — just about anything. Their brains thrive on it.

Children's  
curiosity  
is their  
primary  
motivation  
for  
learning.

Offer safe, authentic sensory delights. Massaging babies with baby oil is a start. Preparing meals to saturate home with good smells is, too. Try cultural dishes for variety of scents and tastes. Take children grocery shopping, linger over the colorful produce section. Plant a veggie or flower garden. Plant scented landscape shrubs, such as lilac, honeysuckle, or white pine.

Toys can be multi-sensory, too. Start with safe and developmentally appropriate ones, including: water-based paints, play dough (add scent and color by pouring in a packet of dry Kool-Aid granules); stuffed animals and puppets; smooth wooden blocks of different shapes; and natural materials like water, mud, sand, stones, grass, sticks, and flowers.

### **Related experiences reinforce learning.**

Development doesn't occur in isolation. Children's growth in one area of development invariably triggers advancements in others. For instance, children's attention to all sounds helps them gradually attend to the sounds of their own culture's language. In turn, language competence spurs emotional and social growth.

Whenever responding to children, help them see how things go together and relate. You'll be amazed at how early children become sensitive, alert, and logical — even infants observe each time you walk toward your baby. If you're lucky, baby has paired the sound of your footsteps with warm experiences. When you come into sight you'll be rewarded with an engaging baby smile. There's no better reinforcement around.

To build preschoolers' connections, link new skills and concepts to existing ones. For instance, pick apples at the orchard. Compare sizes and colors. Sort good apples from rotten ones. Taste fresh apples. Which are sweet? Which are sour? Make an apple pie or applesauce. Plant your own apple tree. You get the idea — connect, relate, and build upon.

### **Children learn through imitation.**

Any six month old will prove kids love to mimic adults. What begins during infancy continues throughout childhood. Your words and actions teach children the ways of the world. By age 18 months, children enjoy *pretending* to be mom or dad. That's when they'd enjoy some toys *just like yours*. Basic examples are props for playing house or simple tools from your occupation, whether it's a briefcase, a tool belt, or a chef's pan.

### **Encourage literacy to build learning pathways.**

Read together daily. Have children point at and name objects in books. Tell stories to each other; talk about daily events.

With preschoolers, use open-ended questions to encourage more elaborate language. Let them see you using writing tools. Provide children with writing tools, too, like crayons or water-based markers. Illustrate how language is used in meaningful ways in daily life, whether in the grocery store, post office, or a restaurant.

### **Gradually introduce children to new experiences just beyond their current ability.**

Children make sense of knowledge layer upon layer. Nice and easy, step by step is the natural way children are born to learn. Follow children's leads to determine when to introduce new ideas or experiences. Overwhelming children with too much too soon discourages learning. Large gaps between what children know and what you expect them to learn often leads to frustration and stress.

Expecting children to develop skills in too many areas at once can also be harmful. Pushing children to excel at a faster pace or scheduling them into too many structured enrichment lessons all at once is counter-productive.

Children's behavior will tell you if you are on the right track. Infants send nonverbal cues to pace learning and interaction. Eye contact, facial expression, and body posture reveal when a child is alert, tired, bored, or over-stimulated.

A preschooler's attention span, depth of concentration, and level of enthusiasm reveals whether experiences are properly timed. Ignoring cues or pressuring children to perform is not helpful. It simply increases anxiety and reduces confidence, both of which impede learning.

### **Repeat experiences as long as children show interest.**

Brain connections are strengthened when repetition continues to be engaging. "Use it, or lose it" could never be more important. But don't confuse repetition with drill. Drill focuses too narrowly on one skill, such as memorizing flash cards.

Helpful repetition is experiencing the same types of activities as long as children find them moderately challenging and enjoyable. Daily ritual activities, such as reading bedtime stories and playing peek-a-boo, are examples of repeated experiences that reinforce learning.

### **Follow children's curiosity and interest in novelty.**

Children's curiosity is their primary motivation for learning. They are acutely attuned to novelty, such as new sounds, tastes, or textures. When children become bored, they're asking for something new for their brain to chew on. It can be as simple as using a different puppet in a favorite game.

### **Draw attention to and provide patterns than engage your child's interest.**

The brain is geared to recognize and make sense of shapes and patterns. Noticing similarities and differences is how children make sense of the world. This is especially true in terms of sight and hearing. Children analyze patterns of sound in order to make sense of their native language. From their earliest days, infants prefer patterns of the human face, even drawings. And later, they learn to decipher written language.

Give children engaging opportunities to explore patterns with: matching games, building with blocks, coloring with crayons, and puzzle play. Guide children's deductions and associations by encouraging them to observe patterns. Patterns abound in nature as well as the human-made world. How are objects alike or different? Which is bigger, smaller, taller, or wider? Which colors, shapes, or designs match?

### **Introduce new activities when children are most receptive.**

There are *windows of opportunity* when a child's brain is primed to absorb specific types of knowledge and acquire specific skills. Children learn easiest when experience corresponds with windows of opportunity.

For instance, the first year of life is critical for social attachment. The first two years are critical for language development. During those two years, it's vital that children's communications illicit interest and engagement from trusted, loving caregivers.

Musical learning also has a window of opportunity. The brain is particularly responsive to music instruction if it begins by age 10. Older children can still learn to play an instrument, but it's easier before 10.

### **Be respectful and responsive to your child's preferred learning style.**

Over time children show preference for particular styles of learning. Some children are more visual learners, others more auditory. Some need to integrate movement into their learning. This probably happens when parts of the brain develop more fully than others. Tune in to a child's strengths and inclinations by watching behavior; provide experiences accordingly.

### **A Resource Book**

Schiller, P. (1999). *Start Smart! Building Brain Power in the Early Years*. Beltsville, MD: Gryphon House.

**About the Author** — Karen Stephens is director of Illinois State University Child Care Center and instructor in child development for the ISU Family and Consumer Sciences Department. For nine years she wrote a weekly parenting column in her local newspaper. Karen has authored early care and education books and is a frequent contributor to *Exchange*.