



## Giving Your Baby a Smart Start

- Dear Parents,
- Neuroscience research tells us that experience wires the brain. Babies are born with only a minimal amount of neurological wiring. They have a little wiring for hearing, some primitive wiring for vision, and some wiring in the low functioning part of the brain called the *cerebellum*. The higher regions of the brain (those used for language, social interactions, self-control, motor control and critical thinking) are not yet wired. The neurons are there and ready to be connected but those connections are dependent on the child's senses to bring information from the child's experiences into the brain.
- It is experience that wires the brain and repetition that strengthens the wiring. By age three, 85% of the foundation of the brain will be wired. By age five, 95% of the foundation of the brain will be wired.



### What You Can Do

- Give your baby time to slowly adjust to the outside world. He will use his senses to explore but he can only absorb a small amount of sensory stimulation at one time. Be careful not to over stimulate your child with too much visual clutter and noise or too many choices.
- Develop trust by meeting your baby's needs as soon as possible. Knowing that someone is there to care for her, leads your child to feel safe. Trust is the foundation of emotional intelligence. You cannot "spoil" a baby.
- Talk to your baby even though he doesn't understand your words yet. Talking to him develops his language and will increase his vocabulary when he begins to speak.
- Teach your baby to calm herself by breathing deeply while holding her close. You will find she syncs her breathing to yours.
- Protect your baby from viewing television and computer screens. A baby's brain is busy wiring for a three-dimensional world. Two-dimensional screens hamper this wiring and interfere with the brain's job of wiring for distance vision.
- Expose your baby to bright primary colors. He arrived seeing only black and white. His brain will be wiring for color all throughout the first year of life and fine tuning that wiring for the next few years.
- Encourage your baby to explore cause and effect. Provide a variety of rattles and musical toys, such as busy boxes and jack-in-the-boxes. Show your baby how to shake rattles harder to make louder sounds and how to bang them to make a completely different sound.
- Be fully present with your baby. Spend quality time with your baby each day. The quality of time spent with little ones is far more important than the quantity of time.

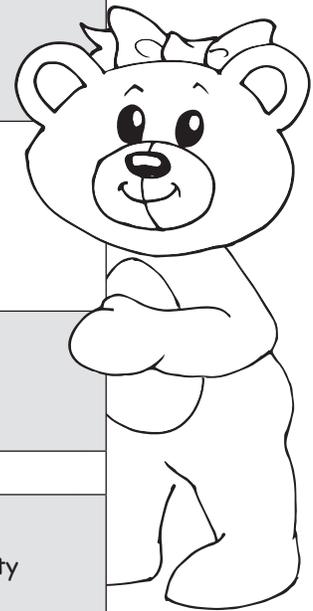


## Understanding Windows of Opportunity

Dear Parents,

There are windows of time when the brain is most fertile for wiring and strengthening specific skills. These fertile times are referred to as "windows of opportunity." When positive experiences occur within these fertile windows of opportunity, brain wiring is optimized.

Skills	Wiring Opportunity	Greatest Enhancement
Emotional Intelligence	0 - 48 months	4 years to puberty
Trust	0 -14 months	
Impulse Control	16 - 48 months	
Social Development	0 - 48 months	4 years to puberty
Attachment	0 -12 months	
Independence	18 - 36 months	
Cooperation	24 - 48 months	
Cognitive Development	0 - 48 months	4 years to puberty
Cause and Effect	0 -16 months	
Problem Solving	16 - 48 months	
Physical Development	0 - 24 months	2 years to puberty
Language Development	0 - 24 months	2- 7 years
Early Sounds	4 - 8 months	8 months to puberty
Vocabulary	0 - 24 months	2- 5 years



### What You Can Do

- Make sure your child has plenty of positive experiences and interactions in the early years.
- Develop social and emotional intelligence by being available to your child and helping your child understand her emotions. When she shows interest in others, provide opportunities for interactions (play dates, mother's day out, school).
- Expand cognitive skills by encouraging your child to explore his world—to figure out how things work and what causes things to happen.
- Build language by talking, reading and singing to your little one.
- Develop physical skills (motor skills) by giving your child plenty of opportunities to move. Keeping your child restrained, such as in a feeding chair or swing, will inhibit her physical development. Any time your child is awake, she belongs in a safe, open space that encourages movement. As your child becomes mobile, provide safe climbing and scooting apparatus.



## Seeing Through Your Baby's Eyes

Dear Parents,

A baby's vision is suited to social interaction right from birth. Babies can focus fairly well on objects that are 9-14 inches away. This is about the distance of your face when you are holding your baby in a cradle position. A baby's ability to see your face plays a primary role in bonding.

A baby's vision at birth is blurry but will steadily improve over the next few months. Babies will begin to distinguish colors between the second and third month of life. Their range of vision will improve to several feet by the end of the second month and, by the third month, they will show interest in people and things across the room. A baby's vision will not be 20/20 until after the first year.

The American Pediatric Association recommends no television, tablets, or computers for children younger than two. Because a baby's brain is wiring for a three-dimensional world, overuse of two-dimensional objects can be confusing to this process.



### What You Can Do

- Hold your newborn close to your face when speaking to him. Your baby's favorite thing to look at is your face!
- Provide three-dimensional objects for your child to interact with visually. Limit exposure to technology.
- During your child's first month of life, place objects you want him to see about 10 inches from his face. During the second month, you can place objects a couple of feet away.
- Move objects in front of your child between the second and third month to allow him to practice tracking.
- Surround your child with colorful toys.
- Babies enjoy looking at broad stripes that are alternating light and dark colors. Hang a striped blanket over the side of your baby's crib or place your baby on top of this blanket when he is playing on the floor.
- Choose brightly-colored toys rather than pale-colored toys when selecting new items of interest for your baby.
- Protect your baby's eyes from the sun. Place a shade on car windows. Have your child wear sunglasses if possible.
- Don't expect your baby to be able to stare at you for a long period of time. It takes great muscle control for him to hold your gaze. This ability will usually develop during the first month.



## Developing Your Baby's Color Palette



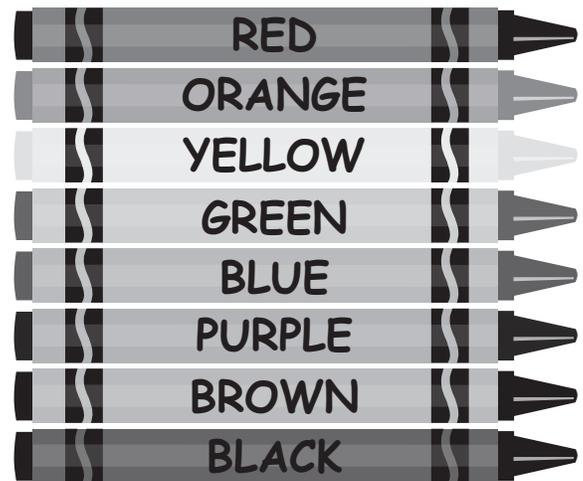
Dear Parents,

Babies are born with a black and white color palette. Colors will wire as a baby experiences them in the outside world. Most babies show that they can distinguish the color red between the second and third month of life. Blue and green will follow within a couple of weeks. Yellow takes a little longer to emerge a month or two later. White becomes a color just after yellow. Black will not become a color, in and of itself, until around a baby's first birthday. From this point through adolescence, fine variations in colors will be distinguished.

Newborn babies will stare at black and white toys and objects because these colors intensify what they are able to see. This does not mean you need to offer only these colors to babies. A baby's brain is wiring for color and interaction with colors is required to do this.

### What You Can Do

- Surround your baby with colors, especially primary colors. Group the toys by color when playing with her.
- When you notice your baby staring at a specific color (most likely red first), provide a few objects of this color for her to look at.
- Expose your older infant to fine variations of colors, such as blocks in several shades of blue or stuffed animals in several shades of green. The more often a baby is exposed to variations in hues the more color discriminate she will become.
- Remember a baby is just developing the ability to distinguish colors. She is not learning to name and identify colors. This will come much later, usually at the end of the second year but sometimes even later.
- Point out colors in books as you read to your baby.
- Don't overwhelm your baby with too many objects and too many colors at one time. Offer a couple of items at a time.
- High contrast images are most appealing to your baby but keep it simple. Less is more when it comes to little ones.





## Respecting Your Baby's Acute Senses

Dear Parents,

Thanks to new findings from neuroscience research, we have a much greater understanding of the significant role senses play in a baby's early brain development. Babies are born with only a minimal amount of neurological wiring. The higher regions of the brain (those used for language, social interactions, self-control, motor control and critical thinking) are not yet wired. The neurons are there and ready to be connected, but those connections are dependent on the child's senses to bring information from the child's experiences into the brain.

A baby's senses are more acute than those of adults. The amount of time babies spend in a watchful and aware state increases from only a few hours at birth to six or more hours per day by the middle of the first year. Because a baby's senses are at their peak, babies can become easily overstimulated. When overstimulated, little ones may choose to sleep or they may cry for what appears to be no reason.

### What You Can Do

- Engage your baby when he is responsive (eyes bright and focused, cooing and babbling, wiggling, smiling) and allow him to rest when he is not.
- Keep lighting natural. Avoid bright lights.
- Protect your baby from bright sun.
- Play music at a moderate volume. Avoid loud music and loud noises.
- Use fragrance-free cleaning supplies and other household products.



SOUND



SMELL



TASTE



TOUCH



SIGHT

- Use fragrance-free toiletries. Eliminate perfumes and colognes. Think about how it feels when you are with someone whose cologne is overpowering. Babies can feel that overpowering sense from household aerosols.
- Offer your baby just one or two items or toys at a time. Too many items at one time may cause your baby to shut down.
- Keep visual stimuli to a minimum. Decorate your baby's room and play space sparingly and thoughtfully.
- Babies prefer warmer temperatures than we do. Turn up the thermostat a couple of degrees or layer your baby's clothing.



## Singing is Joyful and More

Dear Parents,

- Babies love music. They will generally stop what they are doing in order to pay closer attention when they hear a song. If you are singing to them directly, they will make eye contact with you and smile.
- While singing is joyful, it also has many other benefits. Generally singing creates a sense of well-being which in turn causes the brain to release endorphins that help protect the immune system and also act as a memory fixative. Ever wonder why you so easily remember TV ad jingles?
- All early sounds, including music and rhythms, play a profound role in shaping the brain. Linguistics, psychologists, and neuroscientists have recently changed their long-held opinion about the relationship between speaking and singing. The latest data shows that music and language are so intertwined that an awareness of music is critical to a baby's language development. As children grow, music may foster their communication skills. Our sense of song helps us learn to talk, read, and even make friends.

### What You Can Do

- Sing to your baby as often as possible.
- Create songs about taking a bath, eating, changing a diaper, or any other routine. Sing about events and things that happen during the day. Your baby doesn't care if you can carry a tune or if your song has rhyme or even makes sense. Just have fun!
- Sing along with songs on the radio.
- Make an effort to learn songs that are sung to your baby at school. Sing these songs at home.
- Play music for your baby when she is awake. Play a variety of music styles, such as country, classical, pop, and jazz. Babies have sensitive hearing so keep the volume low. Music played at a decibel level that is too high can damage a baby's ears.
- Play a musical instrument (xylophone, bells, piano) when you sing. Your baby will enjoy the novelty.
- Smile when you sing. Remember singing is joyful!



#### Rain, Rain, Go Away

Rain, rain go away.  
Come again another day.  
Little baby wants to play.  
Come again another day.

#### Rock-a-Bye Baby

Rock-a-bye baby in the tree top.  
When the wind blows, the cradle will rock.  
When the bough breaks, the cradle will fall,  
And down will come baby, cradle and all.



## Helping Your Baby Make Transitions

Dear Parents,

Everyone needs time to make transitions. Transitions are about change. It takes the brain a few minutes to tune in to new experiences, people, or environments. Adults are used to making transitions. Babies are not. Transitions for infants are also about change (a passage from one experience, caregiver, stage or activity to another) but occur more often and are less expected than those adults make. It is important for adults to recognize that infants react to even the smallest changes in their lives.

For babies, some transitions occur with physical development. They move quickly from being totally helpless to being able to sit, crawl and walk. Some transitions occur because of caregiver changes. Each adult a baby interacts with has a different smell, look, touch, and voice. Some transitions occur because of a change in the environment, such as lighting and temperature. Other transitions are related to routines, such as feeding, diaper changing, and napping.

### What You Can Do

- Transitions are easier for your baby when you plan for them. Sing to announce a change of activity or say your baby's name to announce your presence. Smooth transitions are dependent on making sure your baby knows what is going to happen next.
- Always give a warning when picking up your baby. With a young infant, say her name and leave your hands in place under her for a few seconds before lifting her. With a mobile infant, say her name, make eye contact, and wait a couple of seconds before lifting her.
- Bring a special toy or blanket to school to help your baby connect home and school.
- Don't rush! Move slowly around your baby to avoid startling him and causing him stress.
- Stay a little while when dropping off your baby at school. This allows her time to adjust.
- Maintain routines as much as possible. Your baby depends on routines to know what is coming next.



#### Diaper Changing Time

(Tune: London Bridge is Falling Down)

Now it's time to change your diaper.  
Change your diaper. Change your diaper.  
Now it's time to change your diaper.  
My sweet baby!

#### Good Morning

Good morning to you!  
Good morning to you!  
With eyes open wide  
And me by your side  
Good morning to you.  
Now what shall we do?



Dear Parents,

During the first year of life, babies are learning about their surroundings and their place in these surroundings. They are attempting to figure out how the world works: *Can I make interesting things happen? Are people caring? Do my accomplishments matter? What draws people to me? Is there someone I can trust to help me and teach me?* The answers to these questions come from a baby's experiences and lay the foundation for future learning. Your actions and reactions, your words, your responses, your voice, and your celebrations of a baby's accomplishments will all contribute to his sense of self.

Right from birth, babies need to know that they can cause good things to happen on a predictable basis. They need to know that when they cry you will come to their aid, when they are hungry you will be there with food, and when they are sick you will help them feel better. During the first year of life, you cannot spoil a baby! If there is one significant person there to meet a baby's needs on a predictable basis, the baby will develop trust. Trust is critical. It is the foundation of emotional intelligence and it also fuels curiosity which promotes exploration and learning.

### What You Can Do

- Be present for your baby. Make sure he knows you are there for him. Acknowledge his call for attention. If you are busy, let your baby know you are coming shortly.
- Being available to your baby does not mean that he never experiences the world alone. Babies need to learn to fall asleep on their own. They need to learn to calm themselves. They need to learn to entertain themselves. You can help your child learn these things by letting him know you are close by. For example, when helping your baby learn to fall asleep on his own, make sure he is dry, fed, and ready for sleep and then put him in bed. If he fusses, go to the door every five minutes or so, and let him know you are there and that you have confidence he will succeed in falling asleep. If he fusses longer than 20 minutes, pick your baby up and re-evaluate the situation.
- Celebrate your baby's accomplishments.
- Respond to your baby's curiosity. This is just as important as feeding and diapering. Provide toys with interesting buttons and sounds. Talk about the objects your child points to and allow him to touch those objects when it is safe to do so.
- You cannot spoil a baby but you can spoil a toddler. At 16 months, your child will begin to have an opinion and you will find that many times it is in opposition to yours. Your child needs to know there are limits. Don't give in to fits.



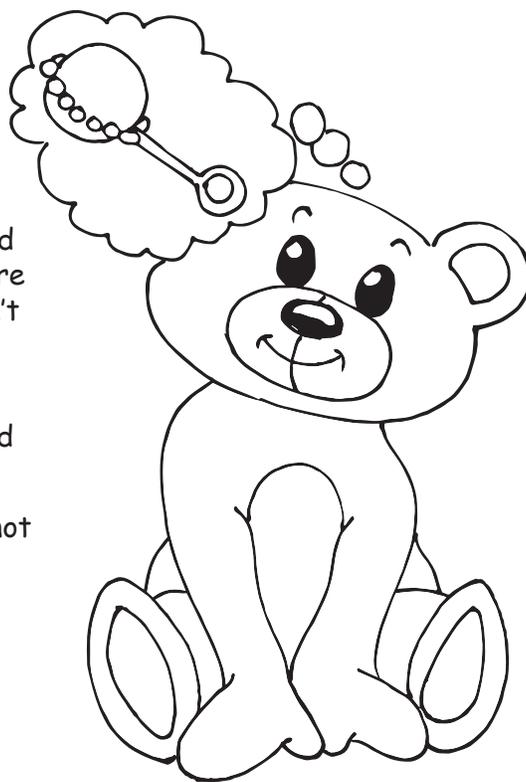


## Understanding Early Memory

Dear Parents,

As adults, our memory is dependent on our knowledge of language, labels, visual organizers, and the context of time and space. Infants do not have any of these tools. Their memory focuses on sensory sensations. A baby's memory is not yet fully understood by science but it appears to be more connected to people, preferences, and feelings especially during the first two years of life. There are three widely accepted theories as to why infants don't appear to retain early experiences as memories as we know them:

- Memories are not accompanied by repetition (recall) and therefore are not strong enough to be retained.
- Memories prior to language are coded differently and not available for later recall.
- Content memories are not significant during the first couple of years. The focus of the brain during these years is on setting up the tools that will be used for organizing information in the future when content will become important.



### What You Can Do

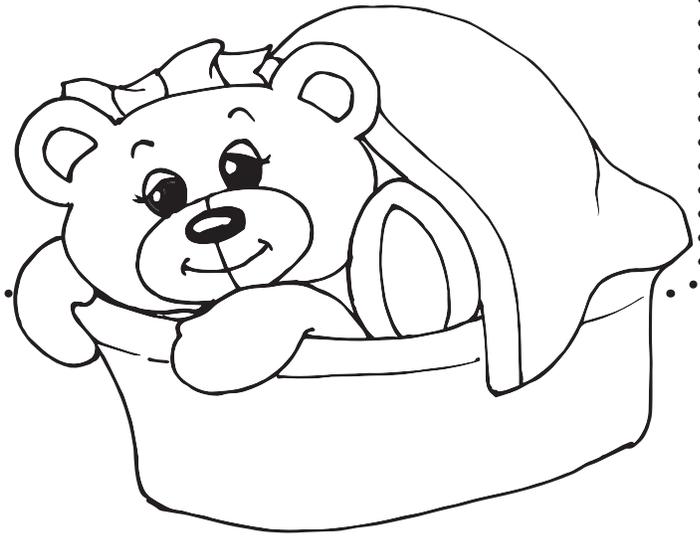
- There is no scientific evidence that anything parents do in the early years in the way of formally "teaching" their child will result in early memory. Instead it is recommended that you offer an environment that is safe and provides plenty of experiences for building an understanding of how the world operates. This environment includes a caring adult to help guide learning.
- Offer your child toys with familiar components. Infants prefer things that are familiar, such as familiar people, toys, and surroundings. They are more likely to approach a toy if there is an element of familiarity to it. For example, they will reach for a new rattle when it is shaken to produce a familiar sound.
- If your child is in childcare, make sure you have selected an environment where children are engaged by caring adults.
- Repeat activities with your baby often. Repetition increases the strength of wiring connections children make when experiencing a new activity or learning a new skill.
- Take photos of your baby and show them to him often over time.
- Enjoy every minute of your child's beginning years. If you store the memories, you can share them with your child later. Little ones often ask us to share our memories:  
*When did I walk? What was my first word? What is something funny I said or did?*



Dear Parents,

Though it may not seem possible, young infants do experience stress. Babies are sensitive to the stress adults feel and their own experiences can generate stressful feelings. For example, babies experience stress when their needs are not met. They cry when they are hungry, overly tired, need to be changed, or when they are getting too much or too little attention. Not attending to a crying baby can cause the baby to feel stress. Babies also experience stress because they are constantly subjected to things and situations they have never encountered.

Babies are not born knowing how to handle their stress. They are still developing their understanding of how the world operates and how they fit into this new environment. You can help reduce stress for your baby and help her learn how to handle her stress better.



### What You Can Do

- Tend to your baby quickly when she cries. Babies who are responded to quickly tend to cry less and therefore are less stressed.
- Keep your newborn baby swaddled.
- If your baby is feeling stressed, hold her close and breathe deeply. She will eventually regulate her breathing to match yours. Some babies respond to the feel of their bare skin on your bare skin.
- Teach your older infant how to take a deep breath by asking him to pretend to smell a flower (breathe in through nose) and then blow out a candle (exhale through mouth).
- Bath your stressed baby in warm water.
- Try cuddling and gently rocking your baby when she is feeling stressed. Try adding more comfort by making a swooshing sound.
- Be careful not to overstimulate your baby. Shield her from bright lights, cool temperatures, fragrances, and loud noises.



- Dear Parents,
- Emotional intelligence includes the ability to recognize and manage one's emotions. Babies, as early as one month old, display emotions that indicate they are keenly aware of what is happening around them. By four months, babies recognize differences in facial expressions (happy, sad, no expression). When babies are content they are more alert, attentive and responsive.
- Around 16 months, a toddler's "sense of self" emerges. Toddlers begin to understand they have feelings and emotions that are separate from others. They begin to express their opinions. We often see this in the form of a tantrum. It is at this point that children's emotional repertoire grows to include self-consciousness, pride, shame, and embarrassment. These more complex emotions show the connection between thinking and feeling. It is at this point that little ones are ready for adults to coach them during emotional moments. This is called *emotional coaching*.

## What You Can Do

- According to Dr. John Gottman, author of *Raising an Emotionally Intelligent Child*, there are five steps to helping children learn to handle their emotions.
  1. Be aware of emotions, both yours and your child's.
  2. Connect with your child. Encourage your child to talk about his emotions.
  3. Listen to your child without judgment.
  4. Help your child name the emotion he is feeling.
  5. Help your child find a solution to what he is feeling.
- Value your child's range of feelings including not only the positive ones (happiness, surprise, calm) but also the negative ones (anger, fear, jealousy, disappointment).
- Be a good role model by handling your emotions in a healthy way.
- Show empathy for others and for your child.
- Look at things from your child's point of view. If he is sad about a broken toy, don't tell him it is silly or that it is only a toy.
- For more information on emotional coaching read *Raising an Emotionally Intelligent Child* by Dr. Gottman, *Pride and Joy* by Kenneth Barish or *Emotional Intelligence* by Daniel Goleman.





Dear Parents,

Babies begin to hear sounds during the fifth month in the womb. In fact, if mom speaks often during the last trimester of her pregnancy, she will be rewarded by her baby recognizing her voice at birth! This early introduction to speaking lays a foundation for language.

Babies pay attention when you speak to them. They are watching the shape of your mouth and the movement of your tongue. They are following the pitch of your voice. This is how they learn to speak. They cannot learn to speak by listening to TV or radio or a recording. They have to have face-to-face contact. The more we read, speak and sing to little ones, the better sound discrimination they develop and the bigger vocabulary they build.

Little ones who are surrounded by language during the first 18 months of life will have vocabularies that are 185 words larger than a peer who was not surrounded by language. By age 2, this vocabulary will grow to 295 more words than their peers.

### What You Can Do

- Read to your baby before she is born. Continue reading to her after she is born.
- Sing to your baby often.
- Talk to baby even though you know she does not yet understand you. Narrate your actions. Discuss your thoughts. Describe things you see.
- Speak to your child from across the room and speak to her face to face. Make a point to speak to her daily with eye contact about 12 inches from her face.
- Check with the doctor if your baby appears to have allergies. Nasal congestion can impact the inner ear and your baby's ability to hear sounds clearly.
- Recite nursery rhymes that you recall from your own childhood or memorize some that are new to use and say them to your baby.
- Teach your baby sign language when she is 8 months old. Sign language increases language. It is also wired on both sides of the brain which leads to faster processing of information.

