

# Program Planning

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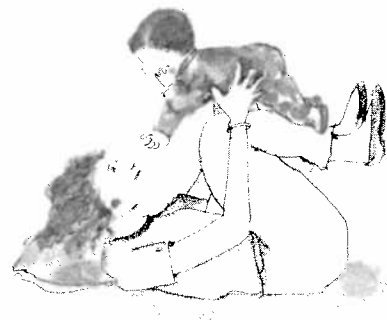
*This section provides brief descriptions of topics that will likely arise as you are planning your programs. We all start out with the same questions and challenges. These are my thoughts and solutions.*

## IDENTIFYING YOUR AUDIENCE

Unlike preschool programs where the parents may or may not be present, and toddler programs where parents are encouraged to stay, babies will definitely be bringing their parents! Parents are key in a baby program. The babies may be sleeping or nursing or crawling around. If they are very young, they will not be able to see you. Most of the time they will not pay any attention to you at all, so it seems silly to pretend they are. This is the first reason I like to direct my attention to the parents.

The second reason is more important. All the latest research on early brain development identifies the parents' role as vital to a child's healthy development. In terms of programming, the research indicates that if the rhymes and songs we use in our programs are to have a positive impact on babies' lives, they must be used by the parent at home with the child everyday, not just once a week when the family comes to a program.

This shift in focus, the inclusion of parents that is required for a successful baby program, often confuses new programmers. If in your whole professional experience you have focused your attention on the children, it will be a paradigm shift for you to focus on the adults. But once you relax in your new role, and once the parents see how much their babies love the rhymes and songs you teach, your programs will run successfully.



## WHY PARENTS ATTEND PROGRAMS

Parents like to attend programs with their infants for a variety of reasons: it gets them out of the house, it provides a way for them to meet other parents with young children, and it provides a social opportunity for both them and their children. Libraries and community centres are valuable meeting places for families. Parents also come to programs to learn some rhymes and songs, and some new ways to play with their babies. And they come to learn about early literacy and child development too.

## BABIES' BEHAVIOUR DURING PROGRAMS

Babies love to socialize, and they learn a lot by watching and playing with other babies. Once they become mobile, they cannot sit still and focus for long periods of time, so we use short repetitive rhymes to play with them. Throughout the program, the babies may be sleeping, or nursing, or playing, and all this is fine, because the intention of baby programs is to have fun with language and to teach the parents some useful ways to play with their children at home.

## CONSIDERING BABIES' AGES

Our audience, then, is comprised of both parents and their babies. And just as it is with any successful children's program, consideration is given during the planning stage, to the ages of the children. Baby programs are particularly demanding in this respect because the needs of children vary so much at the different ages and stages of their development, especially in the first few years.

I like to focus my programs on either: parents with young babies—birth to one, or parents with older babies—one to two. As soon as babies become mobile and start to walk,

they need more movement and more stand-up rhymes. I have also found that parents of the youngest babies usually feel safer in segregated age groups where they know their new babies will be protected from the curiosity of older babies who may not have learned how to control their movements or touch gently yet. Babies are so fascinating, especially to other babies!

Mixed age groups are fine and are especially appropriate in smaller communities where there is a small population base to draw from. They are a bit more challenging to plan and manage. You have to plan a variety of activities that will capture the interest of all the ages at each program.

## COMMUNITY NEEDS ASSESSMENT

If you are reading this book, you have already developed a sense of what is needed in your community. I have found it useful to go beyond my observations and gather statistics that will help me plan my programs.

I gather demographic statistics from Statistics Canada, and birth statistics from my local Health Units. I call the local schools to find out what languages are spoken in the neighbourhood.

I find out how many daycare centres there are in the community, whether babies are staying at home with their parents for the first year or two, or whether they are in daycare. I then calculate how many programs are offered in the local schools and libraries to service families' needs regarding early literacy.

These are statistics I can also present to my sponsors to justify my request for programs in my communities.

Research on early literacy has shown that the greatest impact is achieved through reaching out to the parents of the youngest children,

and to parents with the least education. If you have large numbers of these parents in your community, you will want to consider outreach and use innovative methods of recruitment for your programs.

## RECRUITMENT

Besides the usual avenues for advertising a program (the web page, posters, flyers, newsletters), I recruit parents for my baby programs at neighbourhood baby clinics and through referral from the local Community Health Nurses with whom I have developed a relationship. The Community Health Nurses are a great resource and often connect me with families I could not otherwise reach.

## THE PURPOSE OF YOUR PROGRAM

You may want to use the program to raise the profile of your institution in the community, to entertain, to teach the parents some rhymes, or to teach the parents some early literacy skills. Whatever your purpose and goals, some thought given to this subject in the initial planning stages will give shape and definition to your program. Your objectives will determine both your content and your style of delivery.

## SAMPLE GOALS AND OBJECTIVES

1. To teach parents some rhymes and songs their babies will enjoy and learn from.
2. To support parents in their role as the baby's first teacher.
3. To foster attachment between the parent and the child through the use of oral language.
4. To build a sense of community with the families served.
5. To introduce parents to books their babies will enjoy.
6. To introduce parents to the free materials and services available at the public library or community centre.

## USING YOUR STRENGTHS

Are you an entertainer? Do you perform well with large groups? Or do you need a smaller group? Do you play a musical instrument? Do you speak another language? Acknowledging and using your strengths in the beginning will make your planning easier.

## FLEXIBILITY

I make my initial plan based on my community needs assessment, my institution's goals, my personal strengths, and my best guess about what would work best for my community. Then if I learn that something else would work better, I change. This can be as simple as changing the program time to suit the greatest number of families in my community, or as complex as changing program structure to make the program more appealing to the people I want to attract. Perhaps I will use props and read-aloud books for one group and I will use fewer or none for another group. Sometimes I offer a healthy snack as part of my program and sometimes not. Remaining flexible is important.

## WHERE TO PLACE THE PROGRAM

Choose a room, whether it is inside a library, community centre, health unit, or church that is safe, clean and comfortable for both babies and adults. I have found the ideal room to be carpeted, free of toys and books and all clutter, and big enough to hold about 20 adults comfortably seated in a circle on the floor. Parents feel most relaxed when they know their babies are safe if they happen to crawl outside the circle. This means that the children's department in a library, which is full of books that babies love to play with, is often not the ideal environment for a baby program. Best to choose a big empty room.

Once I've found the right room, I look for gym mats or carpet squares to place in a circle on the floor so parents know where to sit and are comfortable during the program.

## STROLLER PARKING AND STORAGE SPACE

Babies come with equipment: strollers, car seats, diaper bags, and smallish items that need storage space. Strollers and car seats are big items that need parking space and traffic control. Give some thought to where these will be placed, near the program room, so that parents know where to put them, so strollers are safe, and so they don't block access to the program room. A table is a good place for smaller items.

## SCHEDULING

Baby's nap time will determine when families can get out of the house for a program, and surprise, not all babies are the same. Not only is every baby different, but babies' sleep patterns change and evolve continuously in the first two years, so finding a time that will suit everyone is impossible. I choose a time that seems to suit the greatest number of people and then am prepared to change the time to what most of the parents say they prefer. Most of my parents have said they prefer 11:00 AM after the baby's morning nap, or 2:30 PM after the afternoon nap.

## SCHEDULING FOR WORKING PARENTS

If we want to attract families who need our support, it is important for us to offer programs on weekends and in the evenings so that working parents can come. Sunday is a very popular day for working parents.

## INCLUDING THE DADS

More and more fathers are taking an active role in the nurturing of their young children, including infants, and they need to be supported in their new role as caregivers. There is also new research on father involvement that demonstrates the critical role fathers play in their babies' healthy development. Working fathers come to programs when we offer them in the evenings and on the weekends.

At Vancouver Public Library, we have developed a program exclusively for dads and male caregivers and their young children. It's called Man in the Moon. We teach the dads the same rhymes and songs we teach in our other children's programs, but it's all dads, or any male caregiver, and their children. We also read and tell stories that show dads in relationships with children. The program is enormously successful. The men say they really appreciate being able to take part in a children's program exclusively for men. They also say the program helps them connect with other dads to share their experiences of fatherhood.



## MULTICULTURAL PROGRAMS

We live in a diverse multicultural / multilingual society. Let's celebrate this by inviting parents to share rhymes from their countries of origin and to share rhymes in their first languages. This often generates discussion of different cultural practices around child rearing, which is a very rewarding experience for all and promotes intercultural understanding.

## REGISTRATION VERSUS DROP-IN

I like to register families for my programs so I know how many people to expect. If the response is overwhelming, I try to plan another program, or take a waiting list. Registration also gives me a chance to: talk to the individual parents about the program, let the parents know what to expect, find out what language is spoken in the home, how many children will be coming, and what ages the children are. All of this information will help me plan my programs.

However, registration can be a big barrier to service. Many parents find the registration process frustrating, and some parents find it difficult to make a commitment to a weekly outing for a specified duration. Drop-in programs are great for these people. But the result is unpredictable attendance.

Your choice should reflect the goals and objectives of your institution and your program.

## HOW MANY PEOPLE?

Your community needs assessment, room size, and program type will determine the size of your group. I prefer smaller groups of fifteen parents and their babies at one time. A smaller group allows me to be more observant and responsive to the individual families' needs. But many people have as many as fifty families at their drop-in programs. Your choice should be linked to your program goals and objectives.

## HOW MANY WEEKS?

The number of weeks you plan will also depend on your goals and objectives. Many baby programs in the public library run for eight weeks, and some run all year long. My programs run all year in ten-week segments at a time. Remember that if you want your

parents to learn the rhymes and songs, and if you want to build a sense of community, it will take some time.

### HOW LONG SHOULD EACH PROGRAM BE?

The length of your program should also be based on your goals and objectives for the program. If you simply want to attract people to the public library to introduce the library's resources for families, then a half-hour program is great. If you want to offer a broader learning experience, then you will want to plan an hour-long program.

Most programs in public libraries are thirty minutes long. When a fifteen-minute social time is added to the beginning and end, the program then lasts an hour. My programs are an hour long with fifteen minutes added to the beginning and end. The program then lasts an hour and a half. You need to decide what works best for your community.

### PROVIDING A SNACK

In many cultures, food is a traditional custom whenever people join together for a social activity. If your institution has the means, think about providing a light healthy snack as part of your program. No hot drinks that could spill on the baby. Another consideration is that nursing mothers need a snack if they are away from home for any length of time.

### HOW TO SELECT RHYMES

Choose a variety of singing and saying rhymes, and a variety of rhymes by type: bounces, face rhymes, tickling rhymes, lullabies and so on. Select only a few to teach and repeat these each week, adding more as the weeks progress.

I select a list of rhymes I want to teach for the session, then I start with a limited number the first week. I start with anywhere from six to ten rhymes depending on my audience and my environment. Yes, that is enough.

I like to choose rhymes that have beautiful language and imagery and are easy for the parents to learn. I also choose rhymes that are good for specific activities such as diaper-changing, dressing, eating, bathing and going to sleep.

I don't usually teach rhymes I think the parents will have heard elsewhere, like "The Eensy Weensy Spider" and "The Wheels on the Bus," unless the parents ask for them.

### HOW TO TEACH A RHYME

1. When first introducing a rhyme or song, say or sing the rhyme or song through once so the parents can hear how it goes.
2. Repeat the rhyme line by line asking the parents to say it back to you line by line.
3. Repeat the rhyme again, slowly, all together.
4. Repeat again. Now everyone is joining in.

When teaching a song, I often separate the words from the tune. We say the words line by line, then sing la-la-la line by line for the tune. This is especially effective for more complex songs.

The parents say they really appreciate this teaching approach as it gives them a chance to learn and join in.

I also ask the parents to turn their babies around so that they can play the rhymes with their babies face to face. This way the parents get to see how much their babies are enjoying the rhyme, and the babies get to see how much their parents are enjoying the rhyme too. Face to face interaction is also how the babies learn the face muscle movements involved in producing speech sounds.

### REPETITION

Babies love repetition and they need repetition to learn. There is no better way to show parents this than through demonstration.

Repetition is also the key to a successful program. Through repetition the parents can learn the rhymes and join in. I repeat the rhymes I teach three times on the spot. The first is an introduction, the second sees everyone beginning to join in and the third has parents joining in with confidence. Then I repeat the same rhymes each week, again three times on the spot, and add new ones as the weeks go by. Confidence and participation grows with repetition.

### WRITTEN WORDS TO RHYMES

I teach my parents through repetition. That way, the parents can learn the rhymes and at the same time focus on their babies' responses. In the library, I often hand out rhyme sheets for parents to take home so they can learn the rhymes this way too. In my outreach programs, I hand out the rhyme sheets at the end of a ten-week program, after the parents have learned the rhymes by heart. This approach builds the parents' confidence in learning orally, the way their babies learn.

### MORE THAN RHYMES

Because so many new families are isolated at this time in our social history, I like to provide more than just a rhyme time program. I like to provide a meeting place, a social group and a community of support for new parents. Parents who are new to parenting or new to the community really appreciate this aspect of the program.

### BASIC PROGRAM STRUCTURE

The key to success is to plan short activities that move along seamlessly at a relaxed pace.

The opening and closing rituals should be the same each week. Parents and babies alike enjoy the predictability of a pattern.

Repeat the rhymes you have chosen each week, and add new ones as your parents gain confidence in learning and remembering the rhymes.

The stories, whether they are read-aloud books, simple felt stories, pop-ups, big books, or simply told stories, need to be short. Parents and babies alike enjoy stories that are told with lots of expression and stories that involve participation.



### USING THEMES

While themes are an appropriate way to plan preschool and toddler programs, they are really inappropriate for baby programs. The focus of the baby program is the rhymes. And the objective is to teach the parents the rhymes and songs so they will enjoy playing and singing to their babies, wherever they happen to be. Sometimes I use loose thematic connections for the books I read and the stories I tell. But I repeat the rhymes and songs I teach each week, adding a new one or two in the successive weeks in response to what I observe the parents and babies love best.

## USING FELT STORIES AND PUPPETS

I rarely use props in my programs for three reasons. The first is that I want the parents to know that they don't need these things in order to play happily with their babies. The second reason is that I don't want to tantalize the babies with things I don't want them to touch. Babies are naturally curious and want to touch everything they find interesting. They also can't follow directives not to touch. They simply cannot understand this concept yet. The third reason is that I want to encourage interaction between the parent and the child.

If you do use props, you should be prepared for distraction. You should also be aware that young babies can't see very far until about six months of age, so they will not be able to see them. If you choose to use props, short participation stories and songs work best. Always precede and follow with interactive play rhymes that will capture the babies' attention.

## USING RECORDED MUSIC

Sometimes I use recorded music to play in the background as parents and children are assembling for a program in the library, but I never use it in the program itself. Why? Because I want the parents to know that their own voices are the best tools they can use to entertain, soothe and delight their own babies. It doesn't matter to a baby how polished it is, it is the parent's voice that is the most important sound in the baby's life. Many parents don't sing to their babies because they feel they have bad voices. They need reassurance that their voice is the baby's favourite voice, no matter what they think it sounds like.

## DISPLAYS

If your program is in a library, set up displays of baby board books, baby rhyme books, recorded music, and other resources parents can borrow after the program. Parenting books are the least popular items in displays unless the parents have asked for material on a particular subject.

## READING ALOUD

Choose participation stories that will get parents clapping, chanting or singing along. The babies will follow their parents' lead. Short pop-ups, lift-the-flap books, books with repetition, and books you can sing, provide this kind of activity. The key is to keep them short. The parents find them delightful.

A good story that is related to family life or the new baby, whether it is read aloud or simply told to the parents, will be relaxing and pleasurable for the adults.

Reading aloud is also a great opportunity for you to demonstrate to the parents how to talk about the pictures and concepts presented in books when they are reading aloud to their children at home.

## THE BEST REWARD

This is one of the most rewarding programs you will ever do. It's lots of fun, there is a lot to learn, and the rewards are great. The best thing a mom has ever said to me which pretty well sums it up was, "Thank you for showing me how to play with my baby."

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*This section offers easy solutions to some of the most common problems programmers face when delivering programs for families with babies.*

## PACING

Keep the pace relaxed but moving along. Learn all your rhymes, songs and stories by heart, and have them all ready to roll out without pause. But do take the time to respond to what you see happening in the group. Slow down for toddlers. Slow down when you see parents struggling with rhymes they haven't learned yet.

## TOO FAST, TOO MUCH

The biggest problem I see in baby programs I observe is that there are too many rhymes presented too quickly at each program. As a result, babies fuss and parents chat. The way to solve the problem is simply to slow down and repeat. A calm and focused experience is more pleasurable for all concerned.

## WHAT TO DO WHEN PARENTS CHAT

The social aspect of a baby program is one of the most attractive features of the program for the adults. They love to talk with one another about all aspects of parenting and this is a great opportunity for them to meet and make new friends. For this reason, I like to make the space and myself available so that we can all chat for fifteen minutes before and fifteen minutes after the program. This gives the parents the social opportunity they need and it helps me find out what the parents are interested in, which helps me plan my programs.

During the program keep adult talk short and purposeful. Once the parents start chatting amongst themselves and the babies become restless, you've lost the group. Bring the attention back quickly with a bounce or a song.

If chatting becomes a problem during the program, I like to remind my parents that the best time for chatting is before and after the program. During the program we will focus on playing with the babies.

## WHAT TO DO WHEN BABIES CRY

One of the things I love about babies is that they show their emotions without hesitation. When they are uncomfortable or unhappy, they just cry. What can the programmer do?

First we need to understand that babies have different sensitivity thresholds. Some babies will be overwhelmed in a new environment with lots of people they don't know. They will be especially sensitive to noise. Reassure the parent that the baby will settle in over time and keep your environment calm.

Some babies cry because they are over-tired or teething. The precious nap may have been missed. The baby may be colicky. We don't always know why they cry.

So when a baby cries, and this is inevitable, sing! This will usually distract and calm the baby. It will also show the parents how to use song to soothe their babies in times of distress. Being understanding, accepting, and responsive is the best approach.

If a parent wants to leave your program because the baby is inconsolable that day, make sure the parent feels welcome to come back when both parent and child are ready.



## HOW TO USE THE "DISRUPTIONS"

If a baby cries, sing a lullaby. If a parent stands up to bounce or jiggle a fussy baby, ask the whole group to stand up and sing a circle song like "Shoofly" (p. 87). Work this into your program as if you'd planned it all along. Be responsive and sympathetic to the parents' needs.

If some of the babies are crawling around, let them explore their environment as long as they are safe, and reassure the parents that they will come back to play when they are ready. With a watchful eye, carry on doing the rhymes with the parents. The babies will come back!

If a book you are reading aloud or a story you are telling with the use of the felt board or any such activity loses the group's attention, cut it short and return to play rhymes.

## HOW TO RESPOND TO WHAT YOU SEE

Try to be playful and responsive to the babies in your program. If you see that a baby has his socks off, play a toe-wiggling rhyme such as "This Little Piggy" (p. 152). If you see that a baby has just begun to point, play a finger pointing rhyme such as "Two Little Dicky Birds" (p. 101). Young toddlers love this simple rhyme. If someone has just learned how to clap, play "Pat-a-cake" (p. 98).

## WHY BUILD YOUR REPERTOIRE?

The more songs and rhymes you know by heart, the more fun you will have and the more responsive you will be in your programs. But do control the number of rhymes you teach to the group so the parents can learn them. It's better to learn a few rhymes well than it is to hear a whole lot and not be able to remember any.

## WHY REPEAT SO MUCH?

Both parents and babies love repetition and need repetition to learn. There is no better way to show this than through demonstration.

## BABY FOOD AT PROGRAMS

Parents should be welcomed to breast or bottle feed their infants any time throughout the program.

Sometimes, however, parents of babies who are eating solid foods or drinking from a cup will bring these things into the program and it's disruptive for everyone. All the babies will want that cracker or that cup! So I say, "Please feel free to bring baby snacks to the program. However, we will snack before, and after the program (or during snack break). During our play time, we will put all the snacks away and play with our babies."

## HOW TO TEACH PARENTS WHO SPEAK ENGLISH AS A SECOND LANGUAGE

It's a great idea to bring parents together in a multilingual community for programs and to teach some English. However, the language of intimacy between a parent and a child is going to be the parents' first language. We should, therefore, teach some rhymes in the parents' first language. If we don't know any, we can ask the parents to teach a rhyme in their own language so the whole group can learn it. I have found that most parents are shy about teaching in a group, but they will teach me privately. Then I can teach the group, giving them full credit, of course. This little strategy has worked very well for me.

Go slowly for an ESL audience. Use rhymes that have concrete language, such as

"Two Little Eyes" (p. 92), and "Head and Shoulders, Knees and Toes" (p. 76). Mix English with the parents' first language in songs like "Roly Poly" (p. 127), and "Ho, Ho, Watanay" (p. 126). And definitely give these parents written words to take home. This will help them understand what you are singing and saying. You can also ask them if they understand what the words mean, and explain if they don't understand.

I have found that after a while, once parents have become familiar with the English rhymes, they will sing in both languages to their children at home.



#### WHAT IF A BABY DOESN'T LIKE A PARTICULAR RHYME?

Sometimes a baby will cry when he hears a particular rhyme. A lullaby may remind him of the dreaded naptime, or a baby won't enjoy the feeling of being "dropped" through the hole at the end of "A Smooth Road" (p. 80). Delete the rhyme from your program this time, and find another one to substitute. There are hundreds of rhymes to choose from.

#### SEXISM, VIOLENCE AND OTHER COMPLAINTS

Sometimes parents may object to the imagery in a particular song or rhyme: the cradle falls in "Rock-a-Bye Baby" (p. 121), tails are chopped off in "Three Blind Mice," "The Old

Woman Who Lived in a Shoe" whips her children, and the ladybug's children are caught at home in the fire in "Ladybug, Ladybug." You can choose not to select these rhymes or substitute words like: "she kissed them all soundly and tucked them into bed," for the "Old Woman Who Lived in a Shoe."

Complaints often provide a good opportunity for sympathetic listening, group discussion, discussion of the history of rhymes (often rooted in British political history), and the adaptability of rhymes. After listening, I suggest that parents change the words to suit their own family situations.

#### WHAT TO DO ABOUT LATE ARRIVALS

Parents will often arrive late for baby programs. Preparing a baby for an outing is a lot of work and the baby's nap comes first. So when parents arrive late, make them feel welcome by saying or singing hello and move along with the program. When we say hello to a latecomer, we help the parent overcome embarrassment about being late and we instantly make them feel a welcome part of the group.

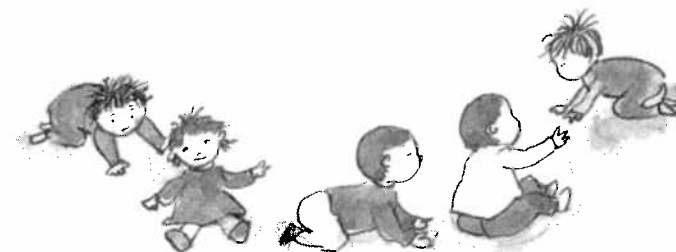
If lateness becomes a problem, I find it helpful to say my programs start fifteen minutes before the formal part of the program actually begins, so parents have time to arrive, get settled and socialize before we start to sing.

#### HAVE FUN!

The programs we present for families of very young children are much appreciated by the parents who attend. There are not many free things they can do with their babies. And as long as we show kindness and love for those babies, we can't really go wrong.

# Understanding

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*This section includes brief introductions to topics that will help you better understand your audience—both the babies you work with and the people who nurture them. The more we know about these topics, the better equipped we are to help parents and caregivers observe, understand, enjoy, and interact with their babies.*

# Baby Brain Development

## THE SCIENTIFIC RESEARCH

Baby brain development is one of the most fascinating areas of scientific research to emerge in recent history. The research was made possible when new brain imaging technologies were invented in the 1970s. These are Positron Emission Tomography (PET) and Magnetic Resonance Imaging (MRI) which are non-invasive scanning devices. These machines enabled neuroscientists to look, for the first time in history, at the structure and activity of the inside of a healthy functioning human brain. The first popular articles to appear on baby brain development as a result of new research were published in *NEWSWEEK* and *TIME MAGAZINE* in 1997. Since that time, many books and articles have been written about baby brain development and new research is emerging all the time. A brief summary of the research follows.

## BEFORE BIRTH: THE FORMATION OF BRAIN CELLS

Just after conception, neurons (brain cells) are produced in a neural tube that will eventually become the baby's spinal column, and the neurons begin to journey up this tube to the various parts of the fetus's developing brain. During the nine months in the womb the fetus will develop over 100 billion neurons, almost all the neurons the baby will ever have.

The nervous system develops in a programmed sequence, from the tip of the spine up to the front of the head.

At the top of the spinal cord, the brain stem or subcortical structures of the brain develop first. Subcortical structures are primarily

responsible for basic biological functions such as circulation, respiration, digestion, elimination, and for a newborn's reflex behaviors such as sucking. These subcortical structures must be fairly well developed at birth for the newborn infant to survive.

After the spinal column and the subcortical structures at the base of the brain come the cerebellum and the basal ganglia which regulate movement; the limbic system which controls emotion and memory; and finally the cerebral cortex, the part of the brain that governs thought, memory, language, mathematics, and problem solving. The cerebral cortex is the last part of the brain to develop. It is the most markedly unformed at birth, and will become the largest.

The cerebral cortex has two hemispheres. The left is primarily responsible for language, but it also predominates in any task involving sequential processing and symbol manipulation: language, mathematics, and music. The left hemisphere is generally the more analytical of the two halves. The right hemisphere processes information more holistically, and is primarily responsible for visual-spatial skills, which are required for perceiving patterns and shapes, and for emotion. While the left hemisphere tends to dominate in most people the two hemispheres function together to give us a total experience of our world.

The cerebral hemispheres are further divided into main areas or lobes. These are: the prefrontal, frontal, parietal, temporal, and occipital lobes. Each plays a major role in various brain functions and in processing signals received from the environment. The two hemispheres are linked by a bridge called the corpus callosum.

The corpus callosum carries nerve signals so that each half of the brain knows what the other half is doing.

None of these brain centres would be able to communicate without a messenger system that conveys electrical impulses from environmental stimulation to their destination sites in the brain. Neural pathways are required.

## AT BIRTH

The human baby's brain is the most undeveloped of all living mammals at birth. The growth that occurs in the first three years of life is greater than at any other time in human development. At birth, only 25% of the baby's brain is formed. By the age of three, the brain grows to about 80% of adult size, and by the age of five, to 90%.

## AFTER BIRTH: THE FORMATION OF NEURAL PATHWAYS

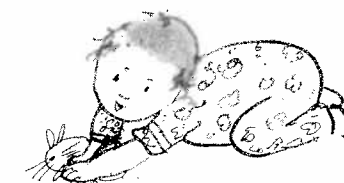
This growth in the baby's brain is partly due to an increase in size as the baby grows, but it is mainly due to the production of miles and miles of connections, or neural pathways within the baby's brain.

Neural pathways are built in response to stimulation from the baby's environment. All the baby's five senses are involved in the creation of neural pathways: hearing, touching, seeing, smelling, and tasting. Environmental stimulation produces hundreds of trillions of connections between the neurons after birth. Neuroscientists sometimes refer to this whole busy connecting process as "getting wired."

Electrical impulses received through sensory stimulation travel along the new neural pathways on messenger links between neurons. These tube-like structures are called axons (senders) and dendrites (receivers).

Each neuron in the brain has only one axon, but it has many dendrites and will generate new ones every time the baby's brain encounters a new experience.

A myelin sheath is formed around pathways that are used most frequently to strengthen and protect them. The protective sheath makes sending and receiving messages from the environment faster and more efficient as the baby develops. Of the hundreds of trillions of new connections that are made after birth, some will be strong and others will be weak; some will survive, and others won't. It is only through repeated use that new connections are strengthened and kept. Neural connections that are not used, or are used less often, will wither away and die. This withering process is called "pruning." Pruning is a natural, and essential process in healthy brain development. It helps the remaining neural connections grow bigger and stronger.



## WINDOWS OF OPPORTUNITY: SENSITIVE TIME PERIODS

When neuroscientists, educators, and health care professionals talk about infant brain development, they sometimes refer to "windows of opportunity." These are the windows of time when stimulation from the outside environment must be received if the brain is to develop to its fullest potential. These windows are also sometimes called "critical periods" or "sensitive periods" in development. The window of opportunity for the development of vision is the shortest, zero to six months. If a baby is born with cataracts, for example, these must be removed by six



months of age or the child's vision will be forever compromised.

Hearing is also critical in the first six months. Because language acquisition begins so early in life, and hearing impairment has such devastating long-term effects on cognitive development, early detection of hearing loss is critical for healthy development. Even babies who are born deaf can be taught language—sign language—if the problem is detected early enough.

The window of opportunity for language acquisition, which is the foundation for cognitive development, is from birth to two years. Babies begin to acquire language long before they can talk and the process begins with the caregiver's first communication of sounds and gestures and words that are exchanged with the baby.

The window of opportunity for emotional attachment is from birth to eighteen months. Attachment at this time is critical for the infant's developing ability to learn how to soothe herself and gain control over her own emotions. Research on child abuse and neglect reveals that infants who have not been held and touched enough at this time will develop brains that are 20 to 30% smaller in size than normal children of the same age.

The window of opportunity for the development of gross motor skills is from birth to four years. Gross motor skill development unfolds in a programmed sequence and each new skill is built upon the gains of the previous skill. First comes rolling over, then sitting up, then crawling, then standing, then walking, then running.

Research reveals that some areas of the brain are more sensitive than others to these critical time periods. Some areas are also capable of recovery and restructuring after early experiential deficits or physical damage:

sometimes the brain can reorganize its functions so that intact regions assume the functions of damaged regions, and full functioning can be restored. This repairability is the result of what neuroscientists refer to as the brain's "neuroplasticity" or flexibility.

#### THE ELECTROCHEMICAL SYSTEM: THE INFLUENCE OF NEUROTRANSMITTERS

Along with brain cell formation and the growth of neural pathways, the baby's electrochemical system is also developing.

The axons and dendrites of the neurons send and receive messages between neurons, but they don't quite touch. The little gap that remains is called a "synapse." When an electrical impulse shoots up an axon, a neurotransmitter is released to help the impulse jump the synaptic gap to the dendrite of another neuron.

Neurotransmitters are chemicals produced in the cell body of the neurons and are used to relay, amplify and modulate electrical signals between the neurons. Scientists have now identified over 50 neurotransmitters! Some of the more popular ones you might know are: endorphins (which reduce pain and make us feel good), serotonin (which relieves depression, relaxes the body, and initiates sleep), cortisol (which governs our stress response), noradrenaline and adrenaline (which heighten awareness), and dopamine (which controls voluntary movement and emotional arousal).

The production and release of neurotransmitters is also influenced by stimulation from the baby's environment. When we caress a baby, for example, we elicit the release of transmitters that make the baby feel good. When we soothe a baby by rocking, singing, and stroking, we elicit the

release of neurotransmitters that help the baby fall into sleep. When we play a game that engages the baby, we are stimulating the release of neurotransmitters that keep the baby awake and alert. Neurotransmitters work in balance to help the brain function normally in response to environmental stimulation.

Research on the production and release of neurotransmitters in the brain is the new scientific frontier and we will hear more about this in the years that lie ahead.



#### CONCLUSION

The research tells us that the growth that occurs in the baby's brain in the first three years of life is greater than at any other time in human development. This means that how a child thinks, how she learns, how she feels about herself and others, how she solves problems and how she responds to life's challenges, are all established before she reaches the age of three.

While many areas of a child's brain continue to grow and adapt through to adolescence, and many early deficits can be restored thanks to the brain's neuroplasticity, it is during the first three years that the foundations for thinking, language, vision, attitudes, aptitudes, and other characteristics are laid down.

Scientists now know that genetics (DNA

coding) drives the creation of some of the baby's brain. Babies are born with the capacity to learn and are driven to develop the skills that will enable them to thrive in the world. But at least 50% of the baby's brain growth occurs as a result of the baby's interaction with the outside world. This means that how we respond to infants and the environments we create for them have an enormous impact on that child's development.

Research has shown that not only do babies who suffer from neglect and abuse develop brains that are actually 30% smaller than normal children of the same age, but they also have disproportionately high levels of cortisol in their brains. These children have a hard time dealing with life's challenges, reading body language cues accurately, and controlling their emotional responses. They also have a hard time paying attention and learning at school.

As early childhood educators, parents, and caregivers, our role is to foster healthy brain development with the kinds of interactions that promote healthy and happy outcomes. What can we do to create the most favourable environments for healthy brain development to occur?

We can foster attachment. Attachment to a loving caregiver in the first three years of life is critical to a baby's healthy development. Attachment provides the foundation upon which every other mental skill can flourish. Babies communicate through emotional expression, and it is through interaction that they develop the security, confidence and motivation to master the more obvious motor, verbal, and cognitive skills they need to thrive in the world. Love matters.

Parents play a vital role in their children's development. What we can do is support

them in this role. Parents need a community of support so that they can give their children what they need for healthy development. What we can do is create a community of support.

Children who are damaged as a result of physical injury, neglect or abuse, can be helped if they are reached soon enough. Early diagnosis and support is critical. What we can do is notice when something is wrong and get help for the family.

Research also tells us that babies do not need expensive toys, flashcards, or video games that promise to boost their IQs for healthy development. Babies learn best through interaction with a loving adult. Just having a loving and responsive adult do lots of holding, talking, singing, reading, and playing with the baby is all babies need for optimum brain development, and the baby will do the rest of the work required herself. What we can do is create programs that support the parents, and teach them how to play with their babies in developmentally appropriate ways.

#### RECOMMENDED VIDEO:

Giangreco, Kathy. *TEN THINGS EVERY CHILD NEEDS*. Produced by WTTW/Chicago and The Chicago Production Center for Robert R. McCormick Tribune Foundation; written and produced by Kathy Giangreco. U.S.: Robert R. McCormick Tribune Foundation, 1997. (one hour)

*This excellent video describes exactly what every child needs for optimal brain development. The ten things are: interaction; touch; a stable relationship with a loving adult; a safe, healthy environment; self-esteem; quality child care; communication; play; music; and reading. Each need is expressed clearly by scientists, doctors, and early child development specialists while showing parents interacting with their children in appropriate ways.*

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*A great book to recommend to parents. Lots of good bits of information on baby brain development, photographs of parents and babies playing together and fun things to do to foster development.*

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## Language Development and Literacy

### WHAT IS LITERACY?

The popular view of literacy throughout most of our history was that it was an ability to decode (read) and encode (write) letter symbols, and that the process for learning how to do this began when a child got to school at the age of six. The scientific research of the last decade, however, reveals a deeper truth. We now know that literacy is built upon a previously learned set of skills with language and communication; that it begins with the oral communication between a parent and a child; and it begins at the beginning of life. Everything a child learns about language and communication in the first few years of life will determine the difficulty or ease with which he later learns to read and write at school. The parents' role in this daily process, how they communicate, and how much they communicate with their children, is critical to the process.

The following summary of infant language development in the first two years shows how babies begin to develop the communication skills they need to bring to the process of learning literacy and why parents and caregivers are the key figures in this process.

### BEFORE BIRTH

The budding of the first skill for later understanding language happens in the baby's sixth month in the womb. Hearing is the first of the baby's five senses to develop. At six months, the fetus's auditory nerves are in place and he will listen and respond to all the sounds in his environment: the rush of blood coursing through the mother's veins,

the mother's heart beat, and the sound of the mother's voice. This is why babies prefer and respond the most to the speech sounds of the mother after birth. These are sounds the baby recognizes. The sounds are not as loud as they were in the womb, but they are familiar. The baby will also respond to the familiar sound of the father's voice.



### BIRTH THROUGH YEAR ONE

At birth, a baby can show he is ready for his first attempts to communicate. If you stick out your tongue a few times slowly and repeatedly, then wait, the baby will respond by sticking out his little tongue too. If you open your mouth wide, the baby will open his mouth wide. He may not be able to smile yet, because he doesn't have enough strength in his cheek muscles, but he will be delighted with this little game that shows him you know he can communicate with you.

The baby's journey of language learning is dependent upon his interaction with the people in his world. Heredity (genetic makeup) plays some part in how he will learn language. Babies are "wired for language" and are driven to learn, but at least

50% of his achievements will come from his interactions with his environment. This means that his parents, and especially his primary caregiver, will have an incredible impact on how he develops. Fostering this early language development is easy. All parents need to do is talk, talk, talk, and the baby will do the rest of the work required.

### PARENTESE

When parents speak to their babies they use a special language that is reserved just for babies. This is a high-pitched, sing-songy, repetitive pattern of speech that is called "baby talk," or "parentese," or "motherese." Even adults who don't have children of their own know instinctively how to do this. The parent's use of exaggerated inflections and animated facial expressions helps the baby tune in to the speech patterns of the language. Babies respond to this by making faces, wiggling their bodies, kicking their feet, and showing excitement. They like it! When they have had enough stimulation and need a rest, they will look, or turn away, move less, frown, arch their backs or look worried.

Babies enjoy imitation. They try to match our sounds and gestures, and they like it when we match our sounds and gestures to theirs.

### LEARNING A SECOND LANGUAGE

All babies are born with the capacity to learn language—whatever language in the world that is spoken to them the most. A baby's sensitivity to speech sounds is so great, he can distinguish between all the different sounds of all the different languages spoken in the world. This is a skill that will be lost by the time he reaches adulthood. The latest

research reveals that the window of opportunity for learning a second language begins to close between nine months and the baby's first birthday. After the age of eight, learning a second language becomes much more difficult, as all adults who have tried will know. This is why researchers say the optimum time for children to learn a second language is in the first eight years of life.

### VISUAL CONNECTIONS

A baby's vision is blurry at first and he can't see in the distance, so the parents have to move in very close to the baby's face, about one foot, so that the baby can see them. It is important for parents to look at the baby when they talk to him because this helps the baby see them, and see the connection between the speech sounds they are making and the corresponding face muscle movements that go with them. The baby is absorbing all this knowledge, he is watching intently, and he will later use this knowledge to generate his own speech sounds in the months that lie ahead.



### COOING

The first sounds the baby can make are soft cooing sounds. These are long vowel sounds like "oo," "aa," and "ee." Babies start to do this at about two months of age. And they love it when parents coo back to them.

### TURN TAKING

By about six weeks, the baby will enjoy a rhythmic conversation with the parent. The baby will respond to the parent's sounds with intent gazes, jerky gestures, sometimes grunting. He will try to initiate a conversation with these gestures and he will look expectantly to the parent for a response. At two months he will add cooing to his repertoire. The conversational game that evolves will look something like this: mother talks, pauses, then baby smiles; father touches, pauses, then baby waves her little arms; mother asks a question, waits, and the baby coos.

This rudimentary conversation with sounds and gestures eliciting responses is a simple game of turn-taking. This is the model of turn-taking that provides the basis for the conversation with words that will take place a bit later on. The rhythmic dance of action and response back and forth between the baby and the parent is the beginning of the baby's ability to have a conversation. A child who is engaged in this way is a child who will eventually become an excellent conversationalist as an adult, one who can talk and also listen.

Babies are born wanting to communicate, and will show frustration and disappointment when their attempts to make it happen are ignored. Their disappointment is expressed in fussing and in disorganized responses.

### FIRST WORDS

The first word the baby will consistently recognize and understand is his own name. This is because it is the word most often repeated to him in a cheerful manner. He knows his name, and he knows it refers to

him by the time he is about four and a half months old. (Babies don't connect what "mommy" and "daddy" mean until about six or seven months. A happy moment for parents!)

At around six months, the baby will start to use consonant sounds and will start to say sounds like "ba-ba-ba," or "da-da-da." At around seven or eight months, most babies will start to "babble." Babbling is not random; it is conscious, controlled practice with the sounds of the native language the baby has heard from his parents.

At around nine or ten months, most babies can show they understand: the names of family members; the words for familiar things, like shoe, juice, teddy; and some events in their lives, like bath time, walk, bedtime, peek-a-boo. The baby is only beginning to make word sounds, and so he may have some trouble making his meaning clear when he tries to speak, but he can understand a lot more than he can say. Comprehension always precedes and exceeds expression.

Research indicates that by nine or ten months of age, on average, a baby can understand the meaning of about 40 words. The number of words he knows is governed by the amount of speech he has heard from his parents. Now he begins to pick up language from everyone in his environment. Research indicates, however, that the speech has to be directed to the baby in order to be meaningful to him. An adult conversation that takes place while he is in the vicinity will be boring and meaningless to him. This is why little children become so restless when adults talk to one another for any length of time. They can't understand the language yet.

## VOCABULARY

Research indicates that vocabulary is a fundamental building block for language, and the measurement of infant vocabulary is one of the greatest predictors of the child's later success at learning how to read. This is why it is so important to talk to the baby. Children need to know many words, and the meaning of those words, long before they come to print-based language to be able to learn how to read.

Research shows, too, that an infant's language development depends a great deal not only on how often the baby is spoken to (quantity), but on the tone in which the talk is delivered (quality). Infants who are spoken to often, and are spoken to in a positive way with lots of encouraging words, have much better outcomes than children who do not. And these outcomes last for a lifetime.

Most babies will say their first meaningful word at about one year of age.

After the baby's first birthday he learns language at an astounding rate, and research shows here, too, that the style the parent or caregiver uses in communication with the child has a huge impact on how this language development will take shape.



## YEAR TWO

In the twelve to twenty-four month period, the baby will begin to say more words that actually mean something. The sounds may not be exact, but the meaning is clear. Again, these words are always things that are meaningful—to him: bedtime, bathtime, familiar objects, people, and animals.

At this point, most parents replace "parentese" by something called "infant-directed speech." Infant-directed speech means using simple and short phrases, and expanding on the baby's new words by putting them into short sentences and repeating the words, fully pronounced, back to the baby. An example is this: the baby says, "ju," and the parent asks, "More juice? Would you like more juice?" Again, this talk needs to be a description of the baby's actions if it is to be interesting or useful to him. The habit parents have of using infant-directed speech to help the baby learn will continue beyond the baby's second year. Here too, the tone of delivery makes all the difference, not only to the baby's developing language and cognitive skills, but also to his developing sense of self-esteem.

At first, from twelve to eighteen months, the baby's words will appear very slowly and will be formed with great effort. The baby is focusing intently on how to produce speech sounds that make his meaning clear. Then around eighteen months there is a vocabulary explosion. By the age of six years, researchers estimate that the average child will know the meaning of about 13,000 words. The time required to develop this amount of vocabulary indicates how much time and attention children need to practice making speech sounds before they get to school.

Two-word sentence phrases, like "Mommy come", will appear in the eighteen to twenty-four month period. The time period is general. Not all babies will develop at exactly the same time. But while time periods vary from child to child, the sequence of learning does not. First comes sound, then comes meaningful sound, then words, then phrases, then sentences.

There are many more words, or speech sounds, for the baby to learn before he can master communication, and many more ways to combine those word sounds into phrases and then sentences so he can make himself perfectly understood. But he is on his way. His understanding of language sounds and how they go together to form meaning is the foundation he needs.

In the years that follow, a baby's language will become much more complex. He will build his comprehension skills. He will learn about semantics (word meaning) and syntax (grammar and word order). He will learn how to make inferences and predictions. He will learn ordering and sequencing skills. And he will increase his vocabulary dramatically. He will need all of these skills before he can successfully learn how to read. He learns all these things just by talking with the people in his world.

Fortunately, much of the communication is instinctive—both for the baby and for the parents. But knowing how and why babies respond, and knowing what we as parents and caregivers can do to provide the optimum environments for speech/language development is very helpful to the baby.

These are a baby's first steps toward literacy.

## WHAT PROGRAMMERS CAN DO

1. Make programs and materials easily accessible for parents.
2. Include and address the parents in programs.
3. Encourage and support the parents in their role as their babies' first teachers.
4. Teach parents rhymes and songs to play with the baby at home.
5. Demonstrate effective methods of communication through role modeling.
6. Tell parents why we are teaching these things so they understand how they are helping their babies take their first steps toward literacy.



## WHAT PARENTS & CAREGIVERS CAN DO

1. Talk to your baby about what you are doing and about what the baby is doing.
2. Play with your baby.
3. Be responsive to your baby's cues.
4. Repeat words and word sounds. Babies need repetition to learn.
5. Give positive feedback. Encourage your baby's attempts to speak.
6. Use expressive vocabulary (say sandals, boots, and slippers, not just shoes).
7. Make connections between your baby and the world around him.
8. Follow your baby's lead. Show interest in the things that interest him.
9. Read aloud and share board books with your baby.

10. Give your toddler a crayon to practise drawing so he can develop the fine motor control he will need to learn how to write.

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*This highly recommended book covers ages zero to five. McGuinness, a cognitive developmental psychologist, links new research on language development to a child's later ability to master reading, and tells parent what they can do to promote healthy language development with their children. Suitable for parents.*



# The Role of Books

Babies who are introduced to age-appropriate books from infancy on will grow up loving books. It's that simple. It is never too early to start. When books are introduced throughout the first year of a baby's life by a warm and loving adult, in the ways that are consistent with the baby's development, the rewards for both parent and child will last a lifetime. What is sharing books with infants all about?

In essence, a book is a presentation of someone's ideas, encoded in pictures (in the case of children's first books) or in words (in the case of adult's books), and sometimes both (in both adults' and children's books). And why do we read them? We read to find things out—about the world and about ourselves. It is no different for babies when age-appropriate books are introduced in ways that correspond to the baby's stage of development.

When a parent reads aloud, even before the baby is born, the baby is treated to a glorious feast of sound patterns that the baby will recognize and be comforted by after birth. This is the perfect time to indulge in wonderful children's picture books. The language in children's picture books is much more sophisticated, poetic, and rhythmic, than conversational speech and will give the baby an aural treat.

When a parent introduces board books and demonstrates the mechanics of page turning, the baby sees how books work. When a parent talks about what is going on in the pictures, the baby learns that this toy (the book) is well worth looking at because it triggers lots of talk, which interests him and soothes him. And this experience is especially valuable when the parent uses this first reading opportunity to increase the baby's vocabulary

and make connections between the book's world and the baby's world.

The first thing a baby will do with a book is put it in his mouth. This is perfectly predictable. This is how the baby explores his world. Everything of interest goes in the mouth. The next thing to happen is that the baby will use his fingers to try to grasp the book and open it. Board books were created with this kind of use in mind: they are small enough for a baby to hold, the sturdy pages stand up to oral exploration, they don't rip like paper pages, and they are easy for little hands to manipulate.



The first books babies are interested in looking at are books of baby faces, like the wonderful series by Margaret Miller called "Baby Faces." These books present the opportunity for parents to point to the book baby's eyes, say "baby's eyes", then point to their own child's eyes and say "Aiden's eyes," and so forth naming all the facial features on both babies. The parent can also talk about the feelings the baby in the picture is showing, and ask Aiden if he sometimes feels that way too. Simple emotions like happy, sad, frustrated, angry, and sleepy, are all shown in the pictures of baby's first books. This talking experience is like the conversations parents have with their babies. The talk is still in "parentese." The only difference is that the conversation is inspired by the book.

When the baby starts pointing to things in the pictures and the parent talks about what the baby is showing interest in, the parent can follow the baby's lead and make connections between the pictures in the book and the people, objects, animals and events in the baby's own world. What a wonderful way to name things! Building the baby's vocabulary is what this is all about. And the conversation is all based on what the baby is showing curiosity about.

Later, as baby's language develops and he begins to say a few words, parents can use books to extend their baby's vocabulary. Now the dog isn't just a dog, the dog says "whoof, whoof!", and it is a big black lab like the neighbour's dog. When the baby is able to take a book and choose for himself what he wants to have read to him, parents can find out all kinds of things their baby is interested in, and read that book over and over again for just as long as the baby finds it fascinating.

A book that is inappropriate for the baby's age (fuzzy, tiny, or cluttered illustrations), a book with pages that tear easily, a book used when the baby is in a bad mood, or a book left lying on the floor will not do any good at all in starting the baby on his first steps toward reading. An appropriate book has to be used interactively with a loving adult when the baby is in a receptive mood. When used in this way, as an activity that is based on the child's interests, encompassed by the parent's warmth and affection, the baby will always associate reading with a warm and loving experience. This is how a lifelong love of books and reading begins.

When children who have been exposed to books in this way get to school they already know many things about how books work and what they are for. They are motivated to read because they want to hear what the author has to say. They know that books

have a front and a back, that they have an upside down and a right side up. They know how to turn pages from right to left, and they know books have stories that have a beginning, a middle and an end.

Parents can help build their children's comprehension skills by talking to their children about what they are reading and seeing in the pictures. Comprehension skills are a very important aspect of learning to read and many children have problems with this.

Children who are familiar with books by the time they get to school will also know that print symbols represent words, and that the print symbols move across the page from left to right in our culture. Parents can help their children understand this concept by tracking their fingers under the text when they are reading to their children in their preschool years. This develops the child's curiosity about text.



Only the child who has been talked to and read to regularly will be ready for the next level of complexity, which is the mechanics of learning how to read print symbols. When the mechanics of reading are introduced, generally around the age of six, the child will use all her skill and understanding in speech and sound production, and apply what she has learned to a new thing, which is interpreting written symbols.

Learning the sound/symbol correspondence between oral and written language is hard work for some children. They need a firm grasp of the sounds of language, the sounds that letters make, a wide range of vocabulary, and familiarity with books in order to be ready to learn to do it successfully.

Again, the parents' and caregivers' role, as the baby's first and most important teachers, is critical, and what they do to prepare their children for reading success, right from the start, makes a world of difference.

You will find more information about this topic in the BABIES LOVE BOOKS section of this book.

#### WHAT PROGRAMMERS CAN DO

1. Search for and provide books that are appropriate for babies.
2. Show parents and caregivers what kinds of books will appeal to their babies.
3. Talk to parents and caregivers about why reading books with their babies is important and what babies learn from the experience.
4. Demonstrate what to say when we talk about the pictures in books.

#### WHAT PARENTS & CAREGIVERS CAN DO

1. Read aloud to your baby.
2. Choose books that are appropriate for your baby's age.
3. Ask a librarian if you need help with book selection.
4. Read books when your baby is in a good mood so that reading is a positive experience.
5. Talk to your baby about what you see in the pictures. Talk about what he is looking at too! Children often notice things in the pictures that adults don't.
6. Make reading fun.

#### RECOMMENDED VIDEO

WHAT CHILDREN NEED IN ORDER TO READ: PREPARING YOUNG CHILDREN FOR READING SUCCESS. Produced by Susan DeBeck. Vancouver: DeBeck Educational Video, 1998.

*This video focuses on preschool children rather than babies, but it describes very well the processes involved in learning how to read.*

#### BIBLIOGRAPHY

McGuinness, Diane. GROWING A READER FROM BIRTH: YOUR CHILD'S PATH FROM LANGUAGE TO LITERACY. New York: W. W. Norton, 2004.

*This highly recommended book covers ages zero to five. McGuinness, a cognitive developmental psychologist, links new research on language development to a child's later ability to master reading, and tells parent what they can do to promote healthy language development with their children. Suitable for parents.*

McGuinness, Diane. WHY OUR CHILDREN CAN'T READ: AND WHAT WE CAN DO ABOUT IT. New York: Simon and Schuster, 1997.

*This is a well-researched critical book for teachers and everyone who is interested in an analysis of historical methods used in teaching children how to read. It includes a critique of: "whole language," "phonics," and other methods that have failed for many, and describes a system that McGuinness says works for all children.*



# The Power of Nursery Rhymes

## INTRODUCTION

For centuries, caregivers around the world in all cultures, and in all languages, have used rhythmic patterns of speech, sound, and movement to delight, soothe, and communicate with their babies. Some cultures call these activities croons or ditties or love songs. In English-speaking cultures, we call them nursery rhymes.

Most of our nursery rhymes come from a very long history of British folk tradition, and have been passed down orally from one caregiver to another over many generations. Original authors and sources are unknown. The first printed versions in English were published by John Newbery in about 1695. These traditional nursery rhymes have been honed and refined and adapted and used over time until they are the perfect little gems they are today.

Modern poets and songwriters continue to add original compositions to our collections. These often become absorbed over time into the folk tradition, passing orally from one caregiver to another, until the original authors become unknown.

"Twinkle, Twinkle, Little Star" is a good example of evolution in the folk tradition. The original melody for this popular song was written in the early eighteenth century by a French compose, now unknown, as a song called "Ah! vous dirai-je, Maman." It was not originally a children's song. Mozart wrote many variations of the melody which is why he is sometimes credited as the original composer. The words, almost as we know them today, were written as a poem called "The Star" by Jane Taylor, and were

published for the first time in England in 1806. Originally, there were five verses, but now only the first is commonly known.

So nursery rhymes are a "living" art form that is constantly changing and evolving. They are chosen and adapted to reflect the habits and traditions of the people who use them.

Babies love nursery rhymes and they respond instinctively to them. But what is it that they like about them and why is it so important that we use them in play with babies?

## NURSERY RHYMES FOSTER ATTACHMENT

Nursery rhymes give parents and caregivers something to say to their babies. They give them a language and a repertoire for play. And the repertoire is something the parent and child can share and enjoy for as long as they enjoy doing these things together for the rest of their lives.

When parents hold, rock, and touch their babies as they say the rhymes, the close physical contact establishes an emotional bond between them. Babies enjoy being held and touched and parents enjoy seeing their babies happy and engaged with them.

Nursery rhymes express emotion. A quiet face-touching rhyme, like "The Moon Is Round," can be used to share a quiet moment. A lullaby can be used to soothe both parent and child in times of distress. A bouncing or galloping rhyme, like "Ten Galloping Horses," can be used to connect with a rambunctious child.

Sharing the kind of rhyme that reflects the baby's feelings helps the baby feel understood, which is a powerful feeling at any age. The selection of the right rhyme at the right time then becomes a powerful communication tool for the parent.

The many different emotions expressed in nursery rhymes also offer parents a vehicle for talking about feelings. The ability to identify and talk about feelings is fundamental to a child's social and emotional well-being.



## NURSERY RHYMES FOSTER BRAIN DEVELOPMENT

The close physical contact, the face-to-face interaction, and the eye contact between the parent and the child all stimulate the firing of synapses in the baby's brain that build neural connections.

Through the repetition of a familiar rhyme babies soon perceive pattern and sequence in events, and they learn to anticipate—the little drop through the knees at the end of a bouncing rhyme like "A Smooth Road," for example, or the tickle that comes at the end of a tickling rhyme. This helps babies develop prediction skills which are a part of cognitive development.

## NURSERY RHYMES FOSTER LANGUAGE DEVELOPMENT

Through face-to-face play with the parent, the baby learns the cheek, lip and tongue muscle movements required for making speech sounds.

The strong rhythm and beat of nursery rhymes when accompanied by a parent's rhythmic body movement, helps the baby absorb the patterns and rhythms of language with her whole body. Bouncing rhymes, or lap rhymes, especially, are enormously powerful in teaching the beat of language. Long before they can speak, infants can move their bodies in response to familiar patterns of sound and movement. When they are more mobile, they will climb up on a parent's lap for a familiar rhyme, initiating play with the parent through gesture and body movement.

The rhyme and alliteration in nursery rhymes helps the baby tune in to the smaller units of sound in language. The smallest units of sound, like the "b" sound in "Baa Baa Black Sheep," are called phonemes. Phoneme imitation helps the baby learn to speak. Later this same skill will be required for learning how to read. A child's ability to play with the sounds of language, and to hear and say phonemes by the age of six is a predictor of reading success.

The expressive and often humorous vocabulary of nursery rhymes teaches babies many new words. Face rhymes introduce the names of facial features. Many action rhymes name the different body parts. Children are exposed to wonderful expressions like "cobbler, cobbler, mend my shoe" and "hickory dickory dock." This vocabulary often becomes a part of a child's repertoire for communication. A sizable vocabulary is another predictor of reading success.

Many nursery rhymes have little stories in them. They are little stories for little people. They have a beginning, a middle, and an end. Children who become familiar with this pattern develop an understanding of basic story structure. This is a narrative skill that will be required for reading and reading comprehension. The same narrative skill helps children construct stories about their own experiences, and helps them learn to communicate in words with the people around them. A child's ability to describe people, places and events is a predictor of reading success.

Hearing stories without seeing illustrations helps babies develop the ability to create pictures in their minds out of the words they hear. This is the beginning of vocabulary formation and story making, and helps foster imagination.

Often nursery rhymes have memorable little characters in them. These rhymes introduce babies to the stock characters of our culture: Old Mother Hubbard, the Old Woman Who Lived in a Shoe, and Humpty Dumpty, will all reappear in stories children read when they get to school. The recognition of these characters helps children understand the stories in which these stock characters appear.

#### ADDITIONAL BENEFITS

Nursery rhymes can be played anywhere anytime: in a grocery store line-up, at the doctor's office, on the change table, in the middle of the night, or on a car ride.

No expensive toys are required. Babies learn best through playful interaction with their loving caregivers.

On top of all this, the rhymes are just fun to do!

#### WHAT PROGRAMMERS CAN DO

1. Use nursery rhymes in your programs.
2. Teach parents the rhymes.
3. Suggest practical times, such as diaper-changing and hand-washing, when parents can use the rhymes.
4. Introduce resources where parents can find more rhymes. (There is a bibliography of Rhyme Resources for Parents in the Program Resources section of this book.)

#### WHAT PARENTS & CAREGIVERS CAN DO

1. Say nursery rhymes in play with your baby. You probably know a few, but you can learn more by attending baby programs and by borrowing collections of nursery rhymes from the public library. Many of these are beautifully illustrated too.
2. Use rhythm and beat when you say the rhymes in play with your baby.
3. Repeat the rhymes your baby likes best. Pretty soon, your baby will be saying them back to you.



# The Power of Song

#### INTRODUCTION

Singing to babies fosters the same kinds of development as the nursery rhymes we say, and has additional benefits.

The singing voice will capture a baby's attention. Whether it's a room full of fifty babies at a gathering or just one unhappy baby on the change table, all the babies will stop what they are doing, and listen when you sing. They love the singing voice. But what is it they like about it, and why is it so important that we sing to babies?

#### SINGING FOSTERS ATTACHMENT

The singing voice offers caregivers a powerful tool for connecting in loving ways with babies.

The singing voice will alter a baby's state of emotional arousal. When we sing a lullaby we calm and relax a baby into sleep. When we sing a bouncing, dancing or clapping song we keep the baby alert and engaged in play. A song can be used at any time of the day or night to calm a fussy baby.

When we sing at predictably stressful times—during daily care routines, such as face and hand-washing, diaper-changing, dressing and undressing, naptime, and bedtime—we distract the baby and help her get through the experience with delight rather than frustration.

Singing also relaxes the adult in stressful situations, and provides an outlet for adult frustration.

When we sing during transitional times—such as preparing to eat, cleaning up, getting

ready to go out—we help young children prepare emotionally for the next activity so they can move happily through the transition.

Matching the mood of the song to the baby's mood helps the baby feel understood.

When we sing to babies at stressful times rather than using less desirable means of control, we show empathy, support, and respect for the baby's feelings. This helps us build a relationship of trust and maintain a close emotional bond with the baby.

In all these circumstances, we are teaching and modelling for the baby how to soothe himself. In time, children will sing to calm, comfort, and delight themselves. Many children who are sung to regularly eventually sing themselves to sleep.

Like poetry, singing expresses emotions that are difficult to convey through any other vehicle in our language. Giving babies this tool for expressing their emotions, right from the start will help them get in touch with their feelings and help them develop into expressive communicators.

#### SINGING FOSTERS LANGUAGE DEVELOPMENT

Singing raises the pitch of our voices and elongates the vowel sounds, just like "parentese," which is the language that babies love and understand best. These are the easiest sounds for them to hear and imitate. Babies start cooing in vowel sounds at about two months so singing is a natural language for them.

Songs have a stronger rhythm and beat than conversational language. This inspires body



movement. The rhythmic movements we use when we sing—such as swaying, rocking, bouncing, clapping or dancing—help the baby absorb the sound patterns of language with her whole body. Feeling the timing, tempo and beat of language helps the baby learn to speak and will support her later introduction to literacy.

Songs break words into syllables. Often there is a different note used to sing the different syllable sounds. Playing with the smaller units of sound in words also helps the baby learn to speak and will support her later introduction to literacy.

Like the nursery rhymes we say, songs are full of rhyme and repetition, but in songs these sounds are even more pronounced.

Babies can sing melodies and they can do the motions to action songs long before they can speak. The encouragement and practice with vocalizing helps babies develop their vocal cords for singing and speaking. The exchange of sound and movement with the caregiver also helps the baby learn how to communicate and take turns in a back and forth rhythm.

Songs introduce unique vocabulary. What a wonderful way for children to hear about twinkling stars, and babushkas, and silver moons sailing o'er the sky!

### SINGING FOSTERS BRAIN DEVELOPMENT

When we learn songs, the words are stored in the left hemisphere of the brain while the melodies are stored in the right. Singing helps young children integrate the two halves of brain function.

Singing builds memory skills. The repetition of songs helps babies build the brain capacity for memory in general. Alphabet songs and counting songs, like "This Old Man," help children remember the sequence of letters and numbers.

Basic concepts babies need to learn, like fast/slow, high/low, soft/loud, up/down and many more are experienced through singing. Even a simple song like "Roly Poly" teaches these concepts.

Singing inspires creativity. When children remember the tune and forget the words, they will often make up their own words. Sometimes these are better, or at least more interesting, than the original words.

Research indicates that singing also develops spatial-temporal skills in young children, that is, being able to perceive patterns and put the pieces of a puzzle together without visual representation. This helps the baby develop problem-solving skills.



### SINGING FOSTERS MOTOR SKILL DEVELOPMENT

Singing inspires rhythmic body movements like rowing, bouncing, dancing, and clapping, and the movements help babies develop body awareness and the muscle and motor skills required for movement.

### SINGING FOSTERS SOCIAL SKILL DEVELOPMENT

Babies love to sing and dance with us. Toddlers especially love to play circle games like "Ring around the Rosie" with us. This experience helps children develop cooperation and social skills. Learning to play together prepares a child for a lifetime of social success at school and in life.

### ADDITIONAL BENEFITS

When we sing songs from our family's cultural heritage, such as an African-American spiritual, a Yiddish or Irish lullaby, a Mexican folk song, etc., we introduce the baby to the family's cultural heritage and help the baby feel connected to his cultural roots, right from the start.

Singing in a group has a magical appeal all its own. When used in a group setting, singing creates bonds between the participants who enjoy singing together.

### WHAT PROGRAMMERS CAN DO

1. Sing songs in your programs. You don't have to be a great singer. In fact, your parents will appreciate your voice more if it isn't perfect.
2. Teach parents your songs.
3. Talk briefly about the benefits babies derive from singing.
4. Encourage parents to sing to their babies. Many parents don't sing because they think their voices aren't good enough. Tell them it doesn't matter to the baby what they think it sounds like, that their voice is the voice their baby loves and needs the most.
5. Encourage parents who speak English as a second language, to sing songs they know in their first language. Musical tones and

rhythms vary across cultures. These tones and rhythms reinforce whatever language the baby is learning, and expose them to the family's cultural traditions. Children have the capacity to absorb them all!

### WHAT PARENTS & CAREGIVERS CAN DO

1. Sing to your baby. While it is fun to use children's songs, any song you know will do.
2. Remember, your voice is the most important sound in your baby's life. Your voice is the voice your baby loves best. It doesn't matter how polished you think it is.
3. Use beat and rhythmic movement in play with your baby.
4. Play with simple musical instruments like rattles for shaking, pots and pans and spoons for clanging and drumming. This is lots of fun and will encourage your baby to develop an appreciation for the music of sound beyond the human voice.
5. Listening to recorded music is an enjoyable experience for you and your baby but it does not inspire the same kinds of development as interactive singing unless you sing, clap and dance along to the music in play with your baby as you both listen to it together.

WHAT'LL I DO WITH THE  
**Baby-o?**

*Nursery Rhymes, Songs, and Stories for Babies*

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