



## **The Learning Patterns and Needs of Infant and Toddlers**

A Teaching Guide  
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Infants learn about the world through touch, sight, sound, taste, and smell. They learn about relationships from how people touch and hold them, and from the tones of voice and facial expressions people use when caring for them. When babies have their needs met – being fed when hungry, comforted when crying, held and touched gently, and kept warm and dry – they begin to trust the adults that care for them. This early sense of trust will help them develop positive relationships for the rest of their lives. Use additional information from these fact sheets:

Basic Infant Development

[www.ces.ncsu.edu/depts/fcs/human/pubs/fcs459.pdf](http://www.ces.ncsu.edu/depts/fcs/human/pubs/fcs459.pdf)

Brain Development

[www.ces.ncsu.edu/depts/fcs/humandev/pubs/brain\\_nc.html](http://www.ces.ncsu.edu/depts/fcs/humandev/pubs/brain_nc.html)

### **Curriculum areas**

Consider all the learning areas for older children and now consider the emerging abilities of infants and toddlers. Pre-language, reading, math and more... There is information included here in the following areas:

Early Literacy and language development | Art | Sensory Awareness | Music and Movement| Our Bodies Our Selves | Science | Blocks

### **Early literacy/pre-reading**

What could be more exciting than hearing your baby's first word? As that first word grows into a sentence and later into conversation, you will be watching a miracle--the miracle of language development. When you take time to listen, talk, read, sing, and play games with your child, you help teach important language skills that last a lifetime.

There has been a good deal of research that supports the link between literacy and school success. In fact, failure in reading in the early grades can lead to failure in later schooling. Consider the following research findings:

In early grades, performing below grade level expectations in reading is the primary reason for retention (Slavin, Karwelt, & Wasik, 1991). Many children are referred to special education programs largely because of reading failure. Often, they then remain in these programs for many years, usually throughout their school life (Kennedy, Birman, & Demaline, 1986).

Literacy refers to reading and writing skills, and builds on oral language skills such as speaking and listening. While formal teaching contributes to skill development in reading and writing, substantial growth in literacy occurs outside of school.

Be sure that you keep in mind that regular hearing and visual screening is important in early years.

Further reading on ear infections and language development.

Child care providers who spend a lot of time with children, can foster the development of literacy in children. Listed below are some measures you can use to determine how literacy-friendly (or literacy-supportive) your program is. Look around your program:

#### IS YOUR CHILD CARE ENVIRONMENT 'PRINT-RICH'?

Are there a lot of materials or areas for children to experiment with letters, words and numbers? These include such items as books (for children of all ages), labels for children to see and read, newspapers, magazines, crayons, pencils, paper (of all kinds), envelopes, chalkboards, magnetic or stamp block letters, typewriters, notes written for children, cooking or science recipes for children to use, lists for grocery shopping, directions for children to refer to in an obstacle course, graphs to read and use, and so on.

#### DO THE CHILDREN HAVE PLENTY OF OPPORTUNITIES TO USE THE MATERIALS IN A MEANINGFUL WAY?

Are there planned activities on a daily basis such as adults reading a variety of books to children, children reading on their own, children reading to other children or to adults, reading recipes in cooking activities, writing and reading letters in a post office dramatic play, making menus in a restaurant dramatic play? Other planned activities can include making Valentines or get well cards for a sick child, sending thank you notes to a local librarian after a recent visit, making personal dictionaries with words children can spell, playing cards or board games, journal writing, dictating stories, and so on. Are there unplanned activities on a daily basis? Are there places for children to go during free time where they can read and write?

#### DO YOU MODEL THE USE OF READING AND WRITING IN REAL LIFE SITUATIONS?

Do you read labels, instructions, and packages to children? Do you write reminder notes to children about upcoming field trips? Do you show children that you value books by taking pride in your collection of books, by using the

library often, by taking good care of books, and by sharing your own enjoyment of good children's and adult literature?

#### ARE THERE DAILY OPPORTUNITIES FOR EXTENDED AND MEANINGFUL CONVERSATION?

Meaningful conversation between children and between adults and children can occur during meal time, after a walk outdoors or a field trip, before a holiday or other event, or after watching a movie together.

#### ARE THERE OPPORTUNITIES FOR THE CREATIVE USE OF LANGUAGE?

Do you sing songs with silly words, use rhymes and riddles, create stories using puppets or a flannel board, or put on skits?

#### DO YOU HELP CHILDREN MAKE THE CONNECTION BETWEEN LETTERS AND WORDS?

You can help children understand the rules that govern our printed language by building on what they already know. For example, you can point out that a STOP sign begins with the same letter as Sam's name, that the words "go" and "no" sound alike, or that Chelsea's name begins with the same sound as the word "cheese," and so on.

The latest Nation's Report Card on Reading found that most elementary school students reported that they read very little. In contrast to the seven hours per day the television set is on in the average home, 82 percent of elementary grade children reported not reading a single book in the preceding month.

The growing body of research on literacy development and its connection to school success should persuade us to provide the best literacy-supportive opportunities we can for children in our care. Getting children hooked on books early in life is one of the best gifts you can give them.

See handout on stages of literacy in children.

Check out books and break into groups to review and practice reading out loud. Have them critique one another based on if they can see the pictures, can they hear the reader, are they animated?

Ask your local librarian to select books specifically for Infants and toddlers.

#### **Art**

Infants (birth to 18 months) learn to grasp, sit-up, crawl, and walk. Older babies learn to talk and express themselves using one or two word sentences. Activities for this stage of development should encourage creativity. You, as a caregiver, can build on what infants do by offering them a variety of safe materials to play with. For example, when infants use a pan as a drum and hit it with their hands, offer them other things to hit the pan with, like wooden spoons. Or offer them other drums like plastic bowls or empty boxes.

How you can help:

1. Hang a colorful mobile over the crib, or place pictures where babies can focus on them.
2. Play sound games with infants. Repeat the sounds babies make back to them. Make up nonsense words or rhyming words when talking to infants.
3. Sing to babies. Play a variety of music around them. By 7 or 8 months, even infants "dance" to music. You can encourage this dancing by taking the infant's hands and moving with the music.
4. Encourage babies' safe and creative use of household materials. For example, give them margarine tubs, empty boxes, or large empty spools – any safe materials that are handy around the house – and let them experiment. Show excitement and interest in what they do.

Toddlers (18 months to 4 years) have growing hand control and coordination. They should be given opportunities to draw with paint, crayons, and chalk. Toddlers will need to be supervised in these activities to understand the right place for drawing. Young toddlers, especially, often use walls, sheets, floors, tables, and other surfaces for drawing, if not given guidance.

For most toddlers, this is a scribbling stage in art and a picture rarely looks like a recognizable object. Using muscles and discovering how things feel is what counts. Toddlers enjoy art experiences such as play dough, clay, shaving cream painting, cornstarch and water, and finger painting. Recipes and directions for these are in the Learn by Doing section.

Later, toddlers are ready for experiences with scissors and glue. Toddlers need careful supervision until they learn the rules for using these materials.

Toddlers have a growing vocabulary and can tell short stories. They also can make-up simple stories about pictures you show them. Encourage the toddler to talk to you and tell you about their experiences.

Toddlers can do much with creative movements. They are learning the names of their body parts and enjoy activities that use these, such as touching toes, eyes, or elbows. Toddlers can do simple creative movements like imitating animals. They enjoy dancing and, like infants, should be exposed to all kinds of music. Toddlers also enjoy making their own music with simple instruments like bells and sticks.

The fantasy play of toddlers comes naturally. They still are learning what is real and what is pretend. Fantasy play, pretending to be the mother or doctor, is how young children learn about the world. It also helps children feel powerful and in control. In make-believe, children are the ones who get to do the ordering instead of being ordered.

### **Sensory Awareness**

If we want to promote sensory awareness in our children, we may have to overcome our own tendency to think about the world around us instead of

experiencing it. We have to become toddlers again and discover wonder in every raindrop, in every leaf, in every passing butterfly. Life is not what happened yesterday or may happen tomorrow. Life is what we experience right now through our senses. Consider these techniques when planning sensory awareness experiences for young children.

Provide a variety of experiences that nurture all the senses. Encourage children to help prepare and taste different kinds of foods. Use small plastic jars with different odors for them to smell. Place objects with different textures out for children to touch. Encourage them to listen to the different sounds that objects make. Participate in these activities with the children instead of simply observing.

Sensory materials encourage the development of the following:

**Activity:** Select one Messy activity to do together or one activity per small groups and have them share after they play for awhile. Get gooey! Bring water for hand washing, towels, and aprons or large t-shirts to cover clothing. Recipes for art materials [http://www.nncc.org/Curriculum/art\\_recip.html](http://www.nncc.org/Curriculum/art_recip.html)

*Note:* Please be aware that many of these materials may be inappropriate for children under three years. They can be dangerous (dried beans or gravel can get stuck in throats or ears), the children may eat them, and they can be very messy, especially soil or shaving cream. Regardless of the age of the children, provide adequate supervision while they are playing with sensory materials.

Fine motor skills (eye-hand coordination)

Creativity (artistic skills)

Creativity in play (deciding how to use the materials) bubbles (recipe follows)

potting or garden soil

sand, wet and dry

ooblik (cornstarch and water)

snow

ice cubes

shaving cream (very messy)

Ivory Snow ® and water

water

aquarium or pea gravel

sea shells

dried beans

cotton balls

grass seed

cornmeal

used, dried coffee grounds

rice

*Talk to teachers while they play about how they interact with children during sensory activities.*

*Say things such as:*

Following the experience, encourage children to think and talk about what they discovered. Use a rich, descriptive vocabulary to describe their experiences. Introduce words they can use to describe what they see, taste, smell, hear, and feel. Keep in mind, though, that words are poor substitutes for experience.

*Another approach:*

Encourage fine discrimination by setting up brief, informal sensory experiments. Set several plastic bottles out with different intensities of the same odor. Invite them to rank the samples from the strongest to the weakest smelling. Begin with three bottles for younger children, and increase to four or five. Set up similar tasks that challenge different senses.

Vocabulary and sensory discrimination skills help children appreciate their capacity for sensory experience. Sense-pleasure play involves letting go to become fully involved, then pulling back slightly to reflect on the experience. Unfortunately, children can be like many adults who have lost their sense of wonder. Children can become so preoccupied with naming and comparing that they stop experiencing.

Here are learning center ideas for helping children explore and learn through their senses.

#### SQUEEZE BOTTLE ART

Purpose: to promote sensory awareness.

Age: 3+

Setting: Learning Center.

Materials: three or four squeeze bottles, flour, salt, and three or four colors of tempera paint.

Activity:

1. Mix equal parts of flour, salt, and water, adding liquid paint for color.
2. Pour into plastic squeeze bottles.
3. Let children squeeze out designs on pieces of cardboard.
4. Put the cardboard up to dry for several days.

#### SMELL COLLECTION

Purpose: to promote sensory awareness.

Age: 4+

Setting: Learning Center.

Materials: about nine film canisters or small plastic bottles; an interesting thing to smell such as perfume, lemon, vanilla, onion, chocolate, coffee grounds, vinegar, crushed pine needles, and rubbing alcohol.

Activity:

1. Put a small amount of each substance into a container. Putting a few drops of liquids on a cotton ball will help to avoid spills and safety hazards.
2. Invite children to smell each container. After a few moments, ask them to describe the odor. What words do they use to describe the odors? Identify what they are smelling.

### TEXTURE FINGER PAINTING

Purpose: to promote sensory awareness.

Age: 3+

Setting: Learning Center.

Materials: textured materials, such as sand or oatmeal, that can be added to finger paint.

Activity: Mix textured materials into finger paint and set it out for children to use.

### OPPOSITES

Purpose: to promote sensory awareness.

Age: 4+

Setting: Learning Center.

Materials: objects that have opposite textures such as rough versus smooth (a pretzel and uncooked spaghetti); wet versus dry (wet and dry sponges); lumpy versus smooth (corrugated and smooth cardboard); hard versus soft (a stone and a cotton ball); warm versus cold (warm water and ice).

Activity:

1. Put each pair on the table sequentially.
2. Have children touch each object in the pair to feel and experience its texture. After a few moments, encourage them to describe the difference in the objects.
3. Some of these objects can be placed in a "feely" bag and pulled out one by one.

### OIL AND WATER BOTTLE

Purpose: to promote sensory awareness.

Age: 3+

Setting: Learning Center.

Materials: a clear plastic bottle (with labels soaked off), food coloring, mineral or baby oil, and glue.

Activity:

1. Fill bottle one-third full of water.
2. Add food coloring.
3. Fill the rest of the bottle with oil.
4. Glue top on securely with quick-bonding glue. Wiggle or shake the bottle to see waves and slowly floating colored bubbles. Let the children examine and manipulate the bottles.

### Science

There are many opportunities available for children to become involved with plants, gardens, or the outdoors in general. Some of these opportunities include children's programs at school gardens, botanic gardens or community gardens. Begin first by how to bring the indoors out and the outdoors in. What has been planted that attracts serendipitous learning opportunities such as watching a butterfly or nurturing a flower to bud or an egg to hatch?

What are the effects of learning in a natural setting?

### The Effects of Playing and Learning in Natural Settings

1. Stimulates all aspects and stages of child development.
2. Offer multi-sensory experiences.
3. Stimulate informal play experiential learning, and natural learning cycles.
4. Stimulate imagination and creativity in a special, boundless way.
5. Integrate children by age, ability, ethnic background.
6. Help children feel good about themselves. Enhance self-esteem.
7. Offer children a feeling of "intense peace."
8. Center children in the environment where they live.
9. Help children understand realities of natural systems.
10. Demonstrate the principle of cycles and processes.
11. Teach that nature is regenerative.
12. Support interdisciplinary, environmental education curricula.
13. Provide flexible and forgiving settings.
14. Aesthetically appealing to all people.

(Source: <http://www.naturalearning.org/> )

(Note to instructor – take a tour or use slides to show science activities for young children– plants, small animals, bug jars, etc.)

Other links

Children's Gardening Tips:

<http://aggie-horticulture.tamu.edu/kindergarden/pnote.htm>

Recycling : [http://www.nccc.org/Curriculum/dc32\\_wee.recycler.html](http://www.nccc.org/Curriculum/dc32_wee.recycler.html)

Environmentally Friendly activities :

[www.cfc-efc.ca/docs/cccf/00000088.htm](http://www.cfc-efc.ca/docs/cccf/00000088.htm)

Sensory Materials

[www.nccc.org/Curriculum/cc23\\_sensory.materials.html](http://www.nccc.org/Curriculum/cc23_sensory.materials.html)

## **Our Bodies, Ourselves**

Many adults believe sex education should begin at puberty. Sexual learning, however, begins at birth. It is during the early years that your child will develop basic attitudes about sexuality.

How do young children learn about sexuality?

- \* In the way they are touched, caressed, cuddled and cared for from birth,
- \* Through exploration and learning how their bodies feel to themselves,
- \* By learning what is OK and not OK to do,
- \* From the words family members say, and don't say, to refer to body parts,
- \* By observing how family members express affection and caring for one another.

For additional information:

Concepts children understand about their bodies

<http://www.cfc-efc.ca/docs/wcfcca/00001173.htm>

Talking to your kids about Sex

<http://www.aacap.org/publications/factsfam/62.htm>

Sexuality and your child

<http://extension.missouri.edu/explore/hesguide/humanrel/gh6002.htm>

### **Music and Movement**

Music and dancing are inside each child. All caregivers do is let them out. That is good news for those of us who are not gifted in these areas. It tells us that all we need to do is encourage, not "teach" music and movement.

Make music. Sing as you work. Any and all songs are acceptable. Sing songs you know or make up new ones. The easiest way to make up a new song is to sing new words to familiar tunes. For example, to the tune of "Here We Go Round the Mulberry Bush," you may sing: This is the way we set the table, set the table, set the table; This is the way we set the table, so we can all eat lunch.

Or you might sing the following to the tune of "Farmer in the Dell":

Mary picks up toys, Mary picks up toys;

Heigh ho the derry oh, Mary picks up toys.

Mary gets some help...

John piles the blocks...

Add children's names or use different actions as you go along.

You can also sing along with records or tapes. Children's artists (Raffi, Pete Seeger, Hap Palmer, Mr. Rogers, and your own favorites) have recorded many songs that are especially appealing to children. Many libraries have children's tapes and records. You may also want to buy one or two. Or ask children to bring favorites from home.

Children often know popular songs on the radio. Encourage them to sing along when they come on. Singing songs together also can be fun. If you play an instrument, encourage children to sing along as you play.

Respond to music. Play music that creates a mood (for example, a lullaby, a march, slow and dreamy music, or Latin rhythms) or music that features one instrument (such as the violin, trumpet, organ, or drums). Let children respond by painting, finger painting, using markers or crayons, or shaping play dough. Encourage participation by making comments such as, "Why don't you paint how the music makes you feel?" or "That fast music helped you make so many little lines." Commenting on the child's activity ("You are moving slowly now") rather than praising the art ("That's a pretty picture") is more likely to encourage creativity in their responses.

Movement describes what young children do. They are rarely still. As you plan movement activities for your children, consider activity records such as those by Hap Palmer. Or try exercising. It's fun and helps everyone stay flexible and feel fit! Think of ways to let children create their own dance movements – to let the dancing out of the child.

Hear and feel rhythms by clapping.

Try clapping together as a group. Start with one steady beat: CLAP, CLAP, CLAP.

Then try two with the first beat accented: CLAP-CLAP, CLAP-CLAP.

And three: CLAP-CLAP-CLAP, CLAP-CLAP, CLAP.

And four: CLAP-CLAP-CLAP-CLAP, CLAP-CLAP-CLAP-CLAP.

After the children understand how to clap along, encourage them to move their hands or dance around the room in response to the rhythm. You can clap slow or fast. The beat may be even or uneven.

Create a rhythm band. Try using body noises to create rhythms. Try claps (hand to hand, hand to thigh, hand to head, hand to floor, or hand to table), stamping feet, clicking tongues, or snapping fingers. Make rhythm instruments for the children to use. Tap spoons on a wooden block or knock wooden blocks together. Let children bang two pot lids together like cymbals. For four-year-olds and over, staple or tape paper plates together with dried beans in the middle, or use egg-shaped, plastic pantyhose containers taped or glued together with pebbles or dried beans inside them. Be sure the containers are securely fastened, and supervise their use. If the beans escape, they may be discovered by younger children who may put them in their mouths, ears, or noses.

Encourage moving to music. Play a wide variety of music. Try marches, waltzes, Latin dances, current hits, and classical tunes. The greater the variety, the better. Have scarves or dress-ups that will encourage movement. You may want to join in to get the activity started. But be careful about demonstrating too much. The goal is for children to create their own movements.

Take advantage of young children's love for music and movement. The activities will help them work off excess energy, develop a love of music, and become more creative!

Activity: Play the game RAIN with the participants. Sit or stand in a circle. Ask them to follow your lead. Simulate a rain storm starting softer and slower and gradually getting louder then soft again. Use this sequence. No talking. Tap index fingers together, tap 2 fingers together, snap fingers, rub palms together, clap hands, stomp feet, clap hands, rub palms, snap fingers, tap two fingers, tap one finger.

More:

Fingerplays: <http://www.nncc.org/Curriculum/fingerplay.html>

Physical activities and more <http://www.cfc-efc.ca/docs/wcfcca/00001173.htm>

### **Blocks**

Blocks are an all-time favorite. Young children used scraps of wood to build imaginary worlds long before blocks were manufactured. What is it that makes block building so special for young children? First of all it's a creative experience. There is no right or wrong way to design an imaginary building or structure. The only limit to what can be done is a child's imagination. Building with blocks provides opportunities to learn about basic math concepts. For example, discovering how many small blocks can be laid end to end to equal one large block introduces addition and the idea of fractions. Balancing blocks to construct a tower illustrates some basic principles of physics. The world of young builders is a fascinating place and one you can help develop. Each child is different and each experience may be different. Children often experiment with shapes and designs. Rather than say "What are you building?" say something like "I see you used three long blocks and two short blocks. Tell me what else you did." Then ask "What else would you like to do?" This helps the child think creatively about block play. If you are anxious about possible dangers in block play, you can develop safety rules. The simplest and easiest to remember is: "Blocks are for building." Your quick reminder can end a child's temptation.

A preschooler using blocks is just as involved in a creative experience as another child using paints or clay. This is a key point because a block builder is as sensitive about criticism as any artist is. Allow a child to discover how to balance a tower of blocks without interfering. Encourage new ideas without laughing at things like "skyscraper zoos" and door-less houses.

More on Blocks <http://www.exnet.iastate.edu/Publications/PM725.pdf>

More on Puzzles <http://www.exnet.iastate.edu/Publications/PM724.pdf>

*Activity sheets in Spanish:*

<http://www.nccc.org/Curriculum/sp.curr.daily.page.html>

*Additional Resources*

Children with Special Needs

<http://www.ces.ncsu.edu/depts/fcs/human/pubs/index.html#special>

Inclusion: <http://www.fpg.unc.edu/~NCEDL/PDFs/edtwo.pdf>

**Parent Resources**

<http://www.uwex.edu/ces/flp/parenting/>

<http://www.ces.ncsu.edu/depts/fcs/smp9/ppages.pdf>

## Teacher Resources

[http://www.nncc.org/Child.Dev/inf\\_todresource.html](http://www.nncc.org/Child.Dev/inf_todresource.html)

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[http://www.nncc.org/Curriculum/dc13\\_sens.aware.htm](http://www.nncc.org/Curriculum/dc13_sens.aware.htm)