Enhancing The Active Learning Of Infants and Toddlers

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Sensory Experiences For Infants

The first two years of life are thought of as the sensory motor stage of development. This means that infants, babies and toddlers learn about their environment, their family, and themselves through their physical senses and their movement experiences.

Crawlers and toddlers can move around a room using their natural curiosity to explore and manipulate everything in their path. Infants, who are much less mobile, rely on caregivers to provide them with sensory stimulation and enriched movement experiences.

For healthy emotional development and brain building, infants MUST have social experiences with caregivers. Adults can enrich early learning experiences by providing appropriate toys and props to stimulate the infant's visual, auditory, and tactile capabilities. Motion and touch are exceptionally important types of sensory stimulation that provide infants with information about their bodies, the location of their bodies or body parts, communication from the caregiver, and can be either soothing or stimulating. Parents and caregivers across cultures sooth, play, bond, and teach infants with comforting sensory stimulation.

Visual

Vision is not fully developed in infancy, but vision development can be stimulated in a variety of ways. Most infants can focus best on items that are about 10 inches from their eyes -- the perfect distance to see the face of the trusted one holding the infant.

Most infants prefer looking at people, rather than things. They can focus and follow slowly moving objects. They can distinguish shapes and forms, especially faces. To help infants with visual inspection, mobiles should be hung about ten to twelve inches from their eyes and could include the upper half of a face, bold patterns, or an unbreakable mirror. Change visual orientation by repositioning the infant in the crib or by various holding positions.

Auditory

Infants can recognize and discriminate sounds. They usually quiet to the sound of a familiar voice and will respond to sounds and voice characteristics. They enjoy the sounds that they can make through their own noises and babbling. Adults should identify and talk about what the infant is paying attention to during alert movements. Talking reading, singing and humming are

great ways to vary and enrich the auditory stimulation of an infant. These are especially good strategies for diaper changing, bathing, and playtime.

Tactile (touch)

Tactile stimulation is one of the most important ways to communicate with an infant. In many ways, touch is our first language. Gentle and loving touch can help enhance early relationship bonds. Infants who are touched and massaged display more eye contact, smiles and vocalizations. It is essential that an infant feels secure and develops a basic sense of trust. It is the adult caregiver who determines the nature of the interactions.

Playful touching and massaging will convey tenderness, security, and attention. As parts of the body are touched or stroked, the brain maps the location of body parts. In this way, the infant develops a sense of body awareness, which will be essential in babyhood and toddlerhood.

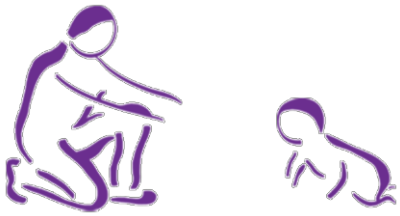
Vestibular (motion)

Body movement and changing of positions activates the vestibular system, which causes the infant to be more alert and attentive. This allows them to do their best gathering of information for early learning. Vestibular (or motion) stimulation requires significant adult supervision for safety. There are various ways to provide beneficial motion stimulation. Rocking and swaying are universal soothing techniques that span across cultures. The infant's vestibular system is very responsive to motion stimulation so the motion should be gentle and slow. Fast paced movements or sudden stops and starts can cause injury or distress in the infant. Motion can be provided up and down, like bouncing or lifting the infant. Side-to-side motion can be provided by holding the infant and gently swaying side-to-side. Rocking motion can be provided in a rocking chair or rocking cradle. For added variety, motion stimulation can be provided by carefully placing the infant over a large ball and while supporting the infant, slowly moving the ball back and forth, side to side, or in a circular motion.

Suggested equipment, toys and props for sensory stimulation:

- Mobiles
- Rocking chair
- Pictures
- Floor or crib gym
- Unbreakable mirrors
- Infant seat
- Bath toys
- Music
- Soft ball
- Soft rattles
- Cradle
- Large ball

Control Experiences for Mobile Infants



In the second half of the first year life, intentional movements become important personal tools for early learning. Unlike infants, babies can intentionally move from one place to another. Crawling allows for exploration of the environment and the creation of new knowledge. Babies can learn more when they can control the movements of their bodies and body parts. Two major sensory-motor tasks of babyhood include: 1) gaining control of the entire body against gravity, and 2) inspecting and manipulating small objects. Postural control needs to be practiced with basic obstacles to enhance these developing motor abilities.

Although normal maturation will ensure that babies are motivated to explore and manipulate, it becomes the responsibility of caregivers to encourage, nurture, and praise early learning, and not hinder it. Pre-language intelligence is sensory-motor intelligence. This reminds adults that babies are active learners and they acquire a vast amount of knowledge before they ever learn to speak. Babies learn the most by having their senses stimulated and their bodies challenged with manipulation options, spatial experiences, and a variety of obstacles.

Manipulation

Self initiated intentional inspection and control of small objects help the mobile infant to construct new knowledge. Manipulation play encourages practice of tasks for gaining control of the muscles that work the arms, hands, and fingers. A major accomplishment of babyhood is intentional reaching, grasping, and releasing. This will ultimately lead to the mastery of daily living skills like self-feeding, pouring liquids, and play skills with balls and other props. Muscle control is first mastered in the arms, then the hands, and finally the fingers.

Suggested equipment, toys and props:

- Various sized plastic or fabric shapes
- Small items (only for closely supervised practice of grasping)
- Pounding toys
- Plastic measuring cups
- Small boxes
- Hinged objects
- Sturdy books
- Unbreakable mirror
- Noise makers, rattles
- Bath toys
- Balls of various sizes and textures
- Soft phone
- Cubes
- Stuffed animals

Space

Babies attempt control skills by first gaining control over their own bodies, then this control is extended to include objects in the environment and control of their own bodies in space. Crawlers like big spaces for crawling through. A small plastic swim pool makes an inviting space to crawl into and the boundaries of the pool help to establish the child's play space. However, going inside any space may only be appealing if the space appears safe. Creating specific safe spaces for the baby provides refreshing challenges for controlled locomotion.

Suggested equipment, toys and props:

- Hoops
- Boxes (open or closed)
- Arches
- Foam swim noodles
- Barrels or tunnels
- Traffic cones
- Mats
- Small plastic pools
- Laundry baskets

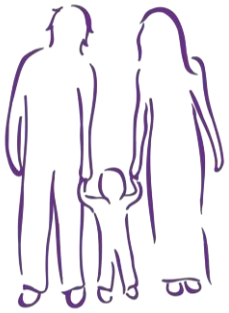
Obstacles

Obstacles challenge the baby's quest for postural control. As babies gain control of various muscle groups, they display the ability to make greater postural adjustments in order to maintain their body stability. Muscle control is first mastered in the head and neck, then the trunk, then the arms and legs. Mobile infants benefit from obstacles and props that stress stability and locomotion tasks. Obstacles that have more than one entry or exit will challenge baby's curiosity. Obstacles that have options for going under, over, up, down, or through will challenge postural control, stability, and decision- making. Crawling up a small wedge is much easier than crawling down while maintaining postural control against gravity.

Suggested equipment, toys and props:

- Small jungle gym
- Tunnels
- Steps
- Milk crates
- Ladder
- Ramps and sliding board
- Mats
- Inner tubes
- Wedge mats
- Large stuffed animals
- Inclines

Exploratory Experiences for Toddlers



Pre-school Puberty!

Because they are transitioning from one type of “lifestyle” to another, let’s think of toddlers as the "adolescents" of early childhood. They are in a transitional place somewhere between babyhood and childhood. Toddlers are no longer totally dependent infants or babies, and yet they do not have the personalities or the thought processes of a school age child. They are beginning to seek independence, yet they require security provided by caregivers. They are rebellious, sometimes even defiant, yet they desire caregiver approval. They are experiencing pre-school puberty!

Toddlers are curious information gatherers. They are explorers and experimenters. They learn by exploring the environment and manipulating objects. They play better with objects than with other toddlers. Much like we believe that the education of an older child should include appropriate books and interactive resource materials, the learning environment of toddlers must contain carefully selected toys, props, and play structures for maximizing the influence of the motor domain on early brain organization and child development. The following play areas and props encourage exploration and experimentation by toddlers.

Ball Handling

This play area introduces the child to balls of all sizes, shapes, and textures that, in turn, encourage adaptations and adjustments. Ball handling "trials and errors" provide a substantial amount of new information for the toddler to catalog and store. Teachers and parents should not have “skill” expectations for toddlers, but rather, “exploration” expectations. In other words, it is fine if a child wants to model grownup skills like throwing or kicking a ball toward a target or hitting a ball with a sponge bat; however, it is equally important to encourage exploratory behaviors with balls like rolling them down a slide or ramp, or taking them for a ride in a wagon, or placing many of them in a container. Lifting and carrying is an essential part of object handling as well. Toddlers should be encouraged to collect, handle, toss, kick, explore, and manipulate various sizes, shapes, and textures of balls.

Suggested equipment, toys and props:

Balls of all sizes, shapes, and textures	Sponge bat
Laundry basket or some other containers for empty and fill practice with balls	Plastic bottles (for rolling the ball towards)
Ramp or slide	Plastic pool as a container for balls
Hoop or net (for tossing or kicking the ball toward)	Small traffic cone (for hitting the ball off the top) Miniature basketball hoop

Balance

Toddlers are just beginning to develop their skills in upright locomotion and balance. Balance activities challenge the toddler's posture control, stability, and travel abilities as he negotiates different widths, angles, and heights of walking surfaces. Lines on the floor with tape or old neckties are a great place to start. Beams and ramps should be at least four inches wide up to two feet wide, and should be varied in height from floor level to no higher than a few inches from the floor. To practice postural control and stability, toddlers should be given various opportunities for stepping up, turning corners, changing directions, and walking on an incline or decline. This play area requires close supervision and careful placement of balance props on mats or carpet to provide a padded surface for safety.

Suggested equipment, toys and props:

Ramps and beams of various widths and surfaces	Objects for stepping over
Mats, sponge, or carpet	Ladder (flat on the floor)
Incline mats (wedges)	Two or three stair steps
	Neck tie, or taped lines

Manipulation

Fine motor abilities involve the coordinated movement of the hands and fingers. Toddlers need ample opportunity to explore and manipulate a wide variety of objects. They need to practice stacking, stringing, twisting, turning, and pounding various sizes of objects. They also need to practice placing shape blocks in appropriate holes, working basic puzzles, and lifting and carrying play props. Object handling like “fill and empty”, messy play with water, sand, and other textures allows practice of fine motor skills and eye-hand coordination in a very appealing context that can be varied.

Suggested equipment, toys and props:

- Plastic or wooden nuts and bolts
- Pounding toys
- Boxes to stack
- Stringing toys
- Empty plastic tennis ball cans to stack
- Cups and other containers
- Puzzles
- Sand and water table
- Stacking toys
- Small shovels and spoons
- Plastic or wooden letters and/or numbers
- Pop up toys
- Shape sorting toys
- Sturdy book

Space

Space awareness is an important aspect of a child's knowledge development. To be able to go through spaces without touching means that children know how much space their bodies need (prediction) and that they can control their movements in relation to props outside their bodies (self regulation). In addition to going through spaces, toddlers like to remain inside safe spaces. Therefore, some tunnels or boxes should be semi-enclosed. Spaces like tunnels, hoops, jungle gyms, boxes, and baskets encourage recognition of spatial relationships of toddler's body to other objects. Small plastic pools and some of the new "instructional" carpets are excellent for establishing spatial boundaries. They also allow for visual and spatial organization of a play area.

Suggested equipment, toys and props:

- Hoops
- Boxes (open or closed)
- Arches
- Baskets
- Foam pool noodles
- Plastic pool
- Barrels and tunnels
- Nylon tent
- Jungle gym
- Floor mat or carpet

Obstacles

Obstacles and inclines allow practice of spatial relationships as the toddler manages her body in relation to the play structures and gravity. Climbing includes shifting body weight, managing body weight, gripping, and endless varied combinations of movements. Climbing challenges a toddler to “motor plan” new movements in order to maneuver through tricky places. Stair climbing is important practice of problem solving and alternating use of limbs. Obstacles which have more than one entry or exit will encourage curiosity, yet allow children to feel safe. Obstacles that have options for going under, over, up, down, or through, develop not only physical competence, but language development as well.

Suggested equipment, toys and props:

- Jungle gym
- Barrels and tunnels
- Steps
- Homemade tents with towels or sheets
- Ladder
- Ramp and sliding board
- Soft Structures (mats of all shapes)
- Inner tubes
- Arches
- Wedge mat

Wheeled Toys

Wheeled toys serve several purposes for skill development in toddlers. First, they encourage pushing and pulling. Wheeled toys allow toddlers to move with greater stability as they push them. Some push toys allow one toddler to ride and another one to push. Pull toys are challenging since, by design, they do not assist with balance. In fact, pull toys can offer substantial stability challenges if the toddler is walking forward but looking back at the toy, or walking backward in order to watch the toy. Riding toys require the child to make coordinated movements, sometimes combining footwork with steering using the hands. Wagons and scooter boards make for an enjoyable ride around the play space. Children may even take rides together in a wagon or one child may push or pull another child providing opportunity for social interaction and taking turns.

Suggested equipment, toys and props:

- Wagon
- Riding toys
- Push toys
- Scooter boards (no standing)
- Pull toys
- Ropes (attached to objects for pulling)

Pretense

Pretense means behavior that is not literal, or in other words it means pretend play. Imitating adult behaviors helps children learn social roles, improves imagination, and enhances language development. Fantasy play and pretending encourages creative and adaptive behaviors, as well as many “pretend” movements.

The motor domain of learning is an integral part of imaginative play. Carefully selecting and arranging toys and props gives toddlers context clues that can almost serve the same purpose of adult modeling.

Suggested equipment, toys and props

- Plastic phones
- Cars and trucks
- Dress up clothes
- Kitchen props
- Dolls
- Plastic lawnmower
- Stuffed animals
- Molded plastic tools
- Boxes
- Job props

Rhythm

Toddlers should be provided ample opportunity to listen to and respond to a variety of music styles. Singing, chanting, and reciting words with music promote language development, body movement, listening skills, and rhythmic reactions in toddlers. Mirrors allow toddlers to watch themselves dance, sway and bounce to the music. Noisemakers and musical instruments allow toddlers to make their own "music". Ritual singing of songs or chants at transition times or as an opening or closing activity reinforces the certainty of familiar routines.

Suggested equipment, toys and props:

- Rhythm instruments
- Hats
- Noisemakers
- Marching flags
- Mirrors
- Music tapes and CD’s
- Rattles
- Circle Time Songs

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