

Guided Play

Plant the Seed of Science



Guided Play

- Encourages exploration
- Risk taking
- Vocabulary development
- Continuous Learning
- Development of the Senses



Science and Vocabulary



- Activities in science encourage discussions that would not naturally occur.
- Children observe, listen, feel, taste, and take apart while exploring everything in their environment (Seefeldt, 2005).
- Parents can cultivate nature investigations with very young children by offering infants natural objects they can explore and investigate.

Natural Scientists



- Children are born natural scientists who are curious and ready to learn. Even in infancy, children compare and contrast objects as they explore their world (McHenry and Buerk,2008).
- Explorations of nature present wonderful opportunities to introduce language and literacy. By providing real objects, we help infants associate words with the concrete objects they represent (Seefeldt, 2005).

Jean Piaget's Four Stages of Development



- Piaget proposed that children go through four major stages of development. Each stage represents a different cognitive change.
- The first stage, lasting from birth until about age 2, is the *sensorimotor* stage, in which infants gather information and express their knowledge about the world through their senses and through movement.

Developing the Senses



- The baby connects to you through each one of the senses as they try to figure out how the world works. Parents act as the guide.
- Some senses (such as smell and taste) are at their most powerful at birth, and hearing fully matures at 1 month, while sight develops gradually over the first year.

Smell



- The sense of smell is one of the earliest to emerge in the fetus.
- By the end of the first trimester baby can smell foods that Mom is eating.
- Newborns orient themselves by smell more than any other sense.
- A baby placed on Mom's belly right after birth will work his way up to the breast for the first nursing, navigating by sense of smell.
- Information provided by: Alan Greene, M.D., clinical professor of pediatrics at Stanford University School of Medicine

Touch



- Touch is the way babies explore their world in utero.
- During the first few months of life, babies rely on grown-ups for tactile stimulation and comfort. By four months, that changes; your baby can reach out and begin actively touching whatever's nearby -- blankets, toys, your face.
- Skin-to-skin contact feels especially comforting to your baby, particularly if you lay her on your chest.
- At about eight months, a baby can touch and identify a familiar object without seeing it, says Greene. "They explore with their hands and create a mental image of the object -- a block or pacifier, for instance. Their tactile sense actually creates an understanding of what the object is."

Sight



- A baby's ability to see the world develops gradually over the first six or seven months of life.
- As baby learns to track movement, don't be alarmed if her eyes occasionally cross, says Steele. "By 3 months, she'll be able to fixate on an object or face with both eyes coordinated
- Babies do have trouble distinguishing one color from another before 4 months -- that's why high-contrast toys and mobiles are better for their eyes.
- By about 7 months, baby's eyesight is mature, and soon after, her eye-hand coordination and depth perception have improved enough to reach for a toy outside her immediate grasp.
- Information from: Glen Steele, O.D., chairman of InfantSEE

Sight Development



- The number-one way to boost baby's vision: Make eye contact with your newborn to help him focus on your face. Pay attention to your baby when you're feeding him -- don't text, talk on the phone or look at the computer.
- Later, make sure your baby gets plenty of tummy time and isn't in a "container" (e.g., a car seat or carrier) for hours on end. Neck and head development is essential for developing good vision because baby needs to raise his head to draw close to a face.

Hearing



- Babies hearing is better than an adults.
- They really pay attention to noises outside the womb, and studies have shown that they do recognize mom's voice."
- At about 2 months, babies begin to respond to their parents' voices by cooing, and soon they're repeating some vowel sounds like ah-ah-ah and ooh-ooh-ooh. "By about 4 months, they start to babble," says Saysana. "At a year or so, they begin saying words, such as dada and mama -- the easiest for babies to say."
- Information from: Michele Saysana, M.D., fellow of the the American Academy of Pediatrics

Hearing Development

- Babies prefer high-pitched voices, so don't be bashful about using baby talk (ditto for soft singing). Do make sure infants aren't exposed to loud noises, such as blaring music or power tools, that could damage their hearing.



Taste



- Taste buds are fully formed at birth, and newborns naturally prefer sweet over salty flavors.
- Once babies are ready for solid food (usually at around 6 months), they still tend to prefer sweeter tastes such as fruit and sweet potatoes to stronger-tasting veggies.
- Babies are born with about 10,000 taste buds.

Informational Books



- Informational books help children learn about things that they might not otherwise notice.
- The illustrations of informational books provide strong support for meaning of new vocabulary.
- Hearing informational books read aloud provides children familiarity with nonfiction text structure.