

## Tip Sheets

### How Play Promotes Cognitive Development



Play promotes the development of a multitude of cognitive skills. When children participate in play and have opportunities to become fully involved in what they are doing, they develop more sophisticated and complex

ways of thinking.

Children learn to solve problems as they discover the answers to their own questions such as “Does this piece go here?” or “What happens when I do this?” When children have the opportunity to have extended periods of time (at least 30 minutes of uninterrupted time) to engage in play that is meaningful and relevant to their lives both attention span and memory skills are enhanced.

#### Music Play

Through singing, reciting, and experimenting with musical instruments, children learn about patterns, rhythm and the existence of many different types of sounds. They learn the basic concepts of opposites such as fast/slow and loud/soft. Listening skills are improved while at the same time they are learning about cause and effect, such as “When I hit the drum hard it makes a loud sound.”

#### Art Play

As children participate in child-directed art activities, they learn about and name colors, shapes and textures. Collage materials provide opportunities to sort and classify (skills important to later learning in the area of mathematics). Children can make guesses as they mix paint colors to

create new colors. Observational and thinking skills are developed as children do a sensory exploration of a tree and then draw the tree.

When children are able to engage in the process of art, rather than focus on the making of a product or craft, they are able to be creative, freely explore art materials and express their ideas and emotions. This builds a sense of competence, confidence and self-esteem.

#### Dramatic Play

Dramatic play provides children with practice in planning, sequencing and storytelling. They must use their imagination to create a theme for their play scenario. This is followed by the use of skills in concentration and attention to focus on organizing their ideas, gathering materials and finding creative solutions to challenges. Children learn to express their ideas and gain an understanding that they can use an object to represent something else and that they themselves can take on another role and represent someone else.

This learning lends itself to future understanding that letters can represent sounds and numbers can represent quantities. Dramatic play enables children to express themselves and to begin to learn that others may view the world in ways that differ from their own.

#### Block Play

As they build with blocks, children learn principles of balance, gravity and cause and effect. They learn which sizes and shapes of blocks are more readily stackable than others, that what goes up eventually

comes down and that when a tower of blocks is bumped just right it is time to start building again. Block play encourages children to come up with ideas about the structures they plan to build, gather the materials necessary, organize these materials and solve problems that occur as they turn their ideas into reality.

During the building of their complex structures, children learn to understand math concepts such as number, order, area, length, pattern and weight. They gain practice in experimenting, observing, comparing, and working with various shapes, sizes and quantities. All of these concepts form the basis for understanding math, science and the development of skills in higher order thinking.

### Play with Manipulatives

Small interlocking blocks such as Legos and bristle blocks, magnet blocks, and pegs and pegboards are considered manipulative toys. Play with manipulatives encourages a variety of math readiness skills that help children to move from concrete to abstract thinking. These skills include:

- Sorting, which is necessary to develop a comprehension of patterns and function.
- Ordering, which enhances number sense.
- Distinguishing patterns, which is a foundation for making math generalizations.
- Recognition of geometric shapes and their relationships.
- The ability to predict measurement.
- Exploration and describing of spatial relationships.

### Sensory Play

Most children enjoy sensory play with materials such as sand, water and other sensory materials. Sensory play provides children with opportunities to experiment with the scientific concepts of sinking, floating, and that there can be changes in state with certain materials (water can become ice and then become water again).

When measuring utensils are added to sensory play children can practice measuring and learn the concepts of more, less, bigger, smaller, equal to and volume. Sensory play allows children to develop and test hypotheses and build skills in scientific reasoning.

### Additional Resources for Information on Play

National Association for the Education of Young Children  
<http://www.naeyc.org/>

For more information, visit [www.inclusivechildcare.org](http://www.inclusivechildcare.org).

Copyright © 2024 Center for Inclusive Child Care

*These materials may be freely reproduced for educational purposes. Information in this tip sheet has been modified from multiple sources.*

*Funding provided by the Minnesota Department of Children, Youth, and Families.*