



## **Developing Early Mathematical Skills**

### **Importance of Numeracy Skills**

Numeracy skills are essential for a strong foundation in mathematics. To foster good numeracy skills, it is crucial to focus on pre-mathematical skills from an early age. Children learn through play and interaction with adults and peers, making the development of mathematical thinking a part of their daily lives.

### **Building a Broad Foundation**

The goal is to provide children with a solid and broad foundation for understanding mathematics and thinking mathematically. Learning through experiences and understanding creates a strong basis upon which further mathematical skills can be built. Mathematics is a cumulative skill, where new concepts are learned on top of previously mastered ones.

### **Individualized Learning**

If a child's pre-mathematical skills are weak, it can hinder their learning and understanding of mathematics. Therefore, it is important to give children the opportunity to build new knowledge at their own pace. The child's role is active, engaging, and responsible, and their development occurs in interaction with others.

Collaboration allows everyone's knowledge and skills to be shared. Children utilize all their senses, move, develop their memory and imagination, and enjoy exploring new ideas. Together, they strive to achieve learning goals, with experiential and functional tasks providing valuable experiences and enhancing motivation.

### **Engaging Activities**

Engaging activities that are interesting, purposeful, and challenging inspire children to learn more. Every child should have opportunities for success and joy in their own activities and as a learner. Learning tasks should be situated in meaningful real-world contexts or presented as problem-based examples connected to the child's everyday life and experiences.

### **Transfer and Application**

Learners should develop the ability to transfer learned information and apply it in different situations. Previously acquired knowledge and skills serve as building blocks for acquiring new ones. Teaching should consider each child's developing skills, interests, strengths, and individual needs.

### **Reflection and Expression**

Learners should be able to express what they have learned and understand their own thought and decision processes. Children are encouraged to reflect on and describe their mathematical observations. Multiple senses should be utilized during mathematics teaching, ensuring a varied and multisensory approach.

### **Functionality and Tools**

Additionally, functionality and the use of appropriate tools, as well as other developmental games, play an important role. Every child must be given the opportunity to understand concepts, promoting their positive perception of themselves as learners in mathematics.

### **Positive Perception of Mathematics**

As children progress, they move from concrete thinking to more abstract levels of thinking. Concreteness is important in the learning process, and children should be allowed to play with math and have hands-on learning experiences. Adults must be systematic, knowing what needs to be done, why it is being done, and the appropriate order of activities.

### **Effective Teaching Strategies**

The child's learning journey should be filled with joy and success. Effective teaching involves speaking math and sharing ideas. By engaging in mathematical conversations, teachers can gain insights into a child's thinking process and how they have constructed their mathematical understanding. Mathematics should be closely tied to concreteness and the child's everyday activities.

## **Collaborative Learning**

Teachers should pay attention to the learning environment and the mathematical opportunities it offers. They should design the environment to promote the mental, physical, and social development of children. Selecting appropriate mathematical games and creating systems for playing those games can enhance learning experiences. For example, a table glued to the back of a game box can allow children to write or draw their own characters after playing a game, providing valuable feedback to the teacher for modifying game selections.

Collaborative learning and encouraging others to learn more are important aspects of the educational journey. Everyday play and activities can serve as valuable learning situations. Adults should incorporate math into their speech and interactions, such as describing the order of objects or counting items. By speaking math, adults can understand how children think and how they develop their own mathematical thinking.

Early childhood mathematics education should support the development of children's mathematical thinking and foster a positive attitude towards mathematics.