

PLAY AND LEARN AT HOME



April 2021

MATH

Early literacy and early math learning go together! This month, we focus on how to build early math skills through reading and play. Find out how to incorporate early math concepts like addition and subtraction, patterning, spatial sense, shapes, sizes, subitizing and problem solving into everyday activities.

FAMILY PLACE PLAY AND LEARN: LEARNING THROUGH PLAY

Block play is one of the best all-around learning activities for children. For example:

- Playing with blocks can increase a child's understanding of sizes, shapes and patterns. "When we put two triangle blocks together, does it make a new shape?" Which block is bigger?"
- Block play can also lead to increased skills in counting, adding, and subtracting. "You have three blocks. How many more do you need to build a square? $3+1=4$."
- Sorting. "Let's put all the square blocks in one pile." or "Let's put all the blue cups in one stack."
- As your child builds, help them use prepositions to describe where they are placing new blocks (some prepositions are directional words that help to point out locations. For example - under, over, above, below, beside, between, next to and through).
- Provide props like action figures or animals to encourage storytelling while building. Your child will learn narrative skills and vocabulary.
- No blocks at home? Building materials can include plastic or paper cups. You can play "Where is the Puppet?". Show them what it looks like when the puppet is on, in, beside the box, etc.



READY, SET, KINDERGARTEN!: SOCIALLY AND EMOTIONALLY READY FOR SCHOOL

Math can't happen without the determination to keep working. Thinking outside the box, or learning to be mentally flexible, is an aspect of math, as is persistence. It's easy to give up when the going gets tough, but we can show our children how to keep working at a problem.

- Give your child the space to express their emotions, good and bad. Setting up a safe environment to talk about their feelings will make them feel comfortable telling you when they have a problem.
- Model problem-solving behavior. Children learn from their favorite role models: you! When you encounter an issue, talk through your thought process with your children.
- Scaffold. If the problem is something they don't have the tools to handle, you can step in to offer a place to start.
- Believe in them. Give them space to work on the problem themselves. They'll find confidence in their abilities when they work it out.

LITTLE EXPLORERS: SCIENCE, TECHNOLOGY, ENGINEERING, ART AND MATH

Subitizing is the ability to “see” and recognize a small number of objects and know instantly how many there are without counting.

A perfect example is dice; when you roll a die and you see two dots on top, you instantly recognize it as representing a quantity of two. You don’t need to count each dot on the dice to figure it out. Subitizing is an important foundational skill for children’s development of number sense, recognizing patterns, and understanding and comparing groups. These skills help children place numbers in the correct order, which lays the foundation for addition, subtraction and understanding number’s sizes.

Subitizing is often visual, such as seeing dogs playing and immediately saying, “Three doggies!” However, it should also include identifying how many actions are in a rhythmic sequence. For instance, children may hear you beat a drum three times and tell you exactly how many beats you made.



Try this: Use the fish in your kit to encourage your child to practice subitizing! Take some fish and ask the child how many there are. Make it a game and change it up! They might start out counting, but the focus should be on getting them to practice over time until they can say ‘how many’ instantly, without really thinking about it. This is a good goal for preschoolers and older children. This also works with folded socks, dice, stuffed animals, and anything you can think of! Use the fish for sorting by color, counting and patterns, too!

LEARNING ON THE GO: BUILDING EARLY LITERACY SKILLS

- Counting books are an obvious way to learn both the names of the numbers and how the quantity they represent. Both are important – like learning both a letter’s name and its sound. Count the objects on the page together and trace the numbers with a finger.
- Reading books with a repeated refrain or sentences often follows a pattern: “Brown bear, brown bear, what do you see? I see a....” Your child is learning to recognize patterns which is an early math skill.
- You can use lots of “math language” when reading together: Use phrases like “more than” or “less than”. Talk about how a character solved a problem and how you might solve the same problem (math is all about solving problems!). Use prepositions and talk about where things are in relation to other things in the illustrations (see section for examples of prepositions)
- Other things to notice in books that are growing early math skills: Sizes (big, little, short, long, wide, narrow, etc.), shapes, comparisons, measuring.

FIND OUT MORE!

If you’d like to know more about phonological awareness or any early literacy topic, we’re happy to help! Visit arapahoelibraries.org, click on **Services** and select **Educator and Parent Support**. Tell us what you’d like to know and we’ll help you find the answers!