



HELPING YOUR  
CHILDREN  
LEARN AND ENJOY  
MATHEMATICS

## ENGAGING ENGLISH- LANGUAGE LEARNERS

Language doesn't have to be a roadblock to your child learning mathematics. There are many child-friendly strategies for sharing math ideas that require very little language. It doesn't matter what language is spoken in your home or whether your child already knows that language—children can learn many math concepts without the need to understand many words. If you are a parent of a young child who does not speak English, here are some strategies teachers have found to be very effective with English-language learners in the classroom—they work equally well at home.

### ■ BUILD MEANING IN REAL SITUATIONS

For many young children, mathematics can seem very abstract. When math problems are related to things they see and do in everyday life, the concepts often become more real and more meaningful. Money and math is a great example. Working with dimes, nickels, and pennies can give young children an early introduction to base 10 (1s, 10s, 100s, . . .), something they will use all their lives. Changing 10 pennies into a dime and 10 dimes into a dollar teaches children that ten 10s equals 100.

Taking a walk around your neighborhood and looking for geometric shapes provides another real-world math experience. Geometry is everywhere; signs, buildings, flowers, automobiles, and playing fields all have geometric shapes. Soon your children will be pointing out shapes wherever you go.

### ■ DOING MATH WITH REAL OBJECTS

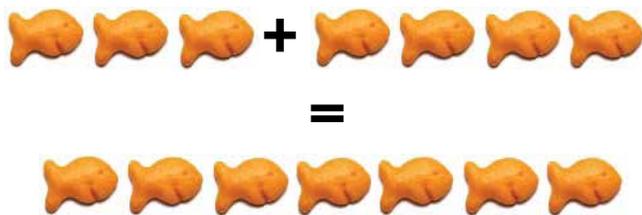
Blocks, beans, buttons, and animal crackers—to name just a few things—are objects that children can handle and sort. They help children make hand-to-eye-to-brain connections and can make a positive difference in learning math for young language learners. Teachers often teach abstract math concepts in the classroom using things children can manipulate such as small blocks and plastic counters (teachers often refer to these as *manipulatives*).

At home you and your children can solve simple problems with easily found objects that make wonderful manipulatives. Things as simple as dried beans and fish crackers can help your children learn math concepts by giving them the opportunity to use



Photo by Paul Giganti, Jr.

their senses of sight and touch while they use their minds to think. Using simple manipulatives can help children “see” what they might not understand if it was explained only with words. For example, here is how you might represent 3 fish crackers plus 4 fish crackers.



Children can count the “fish” together to find out how many.

Other things, such as blocks, shapes, and puzzles, can help children learn more advanced concepts, such as those in geometry. You may find that your children enjoy math more and learn faster if their hands AND minds are involved. Don’t hesitate; let them manipulate!

■ **DRAW PICTURES AND DIAGRAMS**

It’s true: “A picture is worth 1000 words.” Pictures and diagrams can help children understand many math ideas using a minimum of words. Many math concepts can be shown clearly and easily with simple pictures and diagrams. Be aware that pictures are more abstract than using real objects, but drawing pictures is still easier than using language for many young children. It helps them organize their thinking and allows them to explain their ideas with greater ease—and drawing pictures is fun, too!

Children don’t automatically draw pictures to learn math. It helps if you as the parent suggest using pictures as a way to understand a situation or, even better, draw pictures yourself while you solve math problems together. For example, once your young children have mastered counting a pile of real fish crackers, you can introduce the concept of addition by using pictures of fish crackers or drawing simple squiggles to represent the fish. This doodle drawing represents 3 fish plus 4 fish:



Your child can solve the problem by counting the “fish” in the drawing.

■ **ENCOURAGE YOUR CHILDREN TO USE ALL THEIR SENSES IN SOLVING PROBLEMS**

The more opportunities your children have to use all their senses when faced with new and unfamiliar math situations and problems, the easier it will be for them to learn math at a young age. All of our senses—but especially our eyes and hands—help us learn throughout our lives. After all, language is only ONE way we learn.



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