RightStart™ Mathematics Letter to Parents

by Joan A. Cotter, Ph.D.

Mathematics has become increasingly more important. In this century math has emerged as a powerful tool for gaining knowledge, solving problems, and making decisions. We also know much more about effective ways to teach math to all children. However, we must overcome a myth popular in the U.S. that a person must have the right "math genes" to succeed in mathematics. The rest of the world believes, rightly so, that anyone with good instruction and hard work can learn math.

This year the children will be using the Rightstart™ Mathematics program. My hope is that the children will understand and feel comfortable applying mathematics, and continue to enjoy it.

Below are a few notes about the program. If you have questions or comments, you can contact the teacher or me at 888-775-6284 or 888-272-3291, or Info@ALabacus.com.

Understanding and rote

It is vitally important that children understand mathematics. For future success and the ability to apply it, mathematics must be understood. A good rule of thumb is that math must be 95% understand and only 5% memorized. So, often ask your children how they arrived at an answer.

Our number system

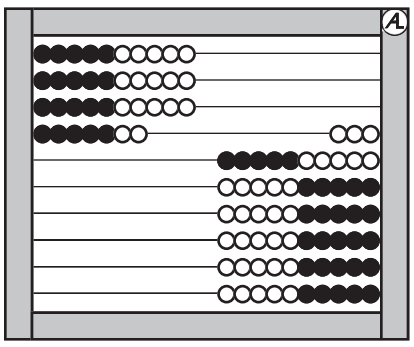
To help the children understand how numbers are organized, kindergarteners and first graders will learn another way to name numbers. The numbers 11 to 19 will be called 1-ten 1, 1-ten 2, . . . 1-ten 9, and the twenties will be called 2-ten, 2-ten 1, . . . , 2-ten 9. Asian languages use this model for counting, which doesn't have the confusion that English has in the teens and in other names.

The first graders will work with hundreds and thousands early in first grade. In order to understand the pattern of trading 10 ones for 1 ten, 10 tens for 1 hundred, and so forth, children need to work with 4 digits.

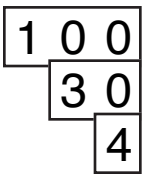
Hands-on Materials

The children's primary hands-on tool for grades K-2 is the AL abacus shown below. The beads are grouped in 5s, which allows quick recognition and visualization. They will also use place-value cards, as shown below, to construct numbers. These cards encourage reading numbers in the normal order from left to right. In contrast, the "column" model suggests starting at the *right* and saying, ones, tens, hundreds.

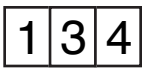
The children also will use a linear model for fractions as shown below on the right.

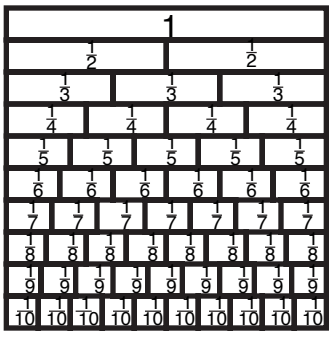


The AL abacus shown with 3-ten 7 (37) entered. Note that 7 is seen as 5 and 2, making it visualizable.



Place value cards.





A fraction chart.

Problem Solving

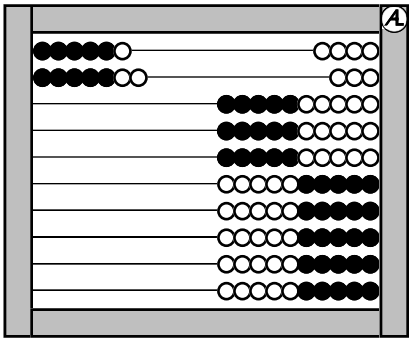
Frequently, the class will start with a problem which can be solved in more than one way. Help your child view this as solving a puzzle. It takes persistence and thinking. The purpose is to engage the student in thinking, not merely following someone's method. The children will then be asked to explain their thinking to the class.

Worksheets

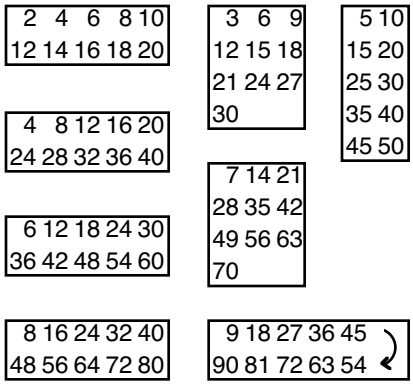
The younger children will have very few worksheets. They will be using hands-on activities, problem solving, and games for repetition.

Learning the facts

Children do need to learn the facts, but without counting, which is slow and inaccurate. Therefore, it is vitally important that they learn them with strategies. That is, they need a way to construct a fact mentally. For example, to add 6 + 7 they might think of 6 as 5 and 1 and 7 as 5 and 2. See the figure below on the left. Since the two 5s (the dark beads) make 10, 6 + 7 is 10 + 1 + 2, or 13. Often ask your children to explain their thinking.



Adding 6 + 7 by seeing two tens plus 1 plus 2.



Skip counting patterns.

Games are used for practice and repetition because they are more motivating, interesting, and less anxiety-producing than flash cards, which give the false impression that thinking is not expected in math class.

Multiplication and division facts are approached through skip counting. The patterns are shown above on the right.

Geometry

Geometry is much more than an abstract high school course about proofs. Geometry helps us describe and understand our world and its structures. Kindergarteners will learn about parallel and perpendicular lines and some basic shapes. First graders will work with combining triangles. The children in grades 2 to 4 will work with small drawing boards, T-squares, and triangles. They will draw equilateral triangles and divide them into halves, fourths, and other fractions. They will also draw several stars. They will measure figures and find perimeters.

Other topics

The children will learn about money, clocks, measurement, and other topics.

A parent's attitude is very important. Help your children view math as a wonderful tool to learn about, not as drudgery. It is a way of thinking, not a bag of tricks to memorize.