

# Before You Start ...

## THE CHALLENGE

Today's average high school graduate knows and can do less math than their counterpart of ten, fifteen, or twenty years ago. Basic math skills have deteriorated to the point that many wonder if this country can continue to be a leader in shaping the technology of the future. Unfortunately, the general trend of modern education of all types is downward. Students in private education, while they score higher overall than public school students, still do poorly in math computation skills.

## THE GOAL

The goal of this curriculum is to provide the parent and teacher with a tool that will help them effectively combat this deterioration of math skills by raising the level of student performance. Research of the content and methods of other existing curriculums, the concepts evaluated by achievement tests, and typical courses of study resulted in selection of the *Scope and Sequence* starting on page 18. This curriculum was not planned around any particular group of students. Rather, it was determined that the material in this curriculum constituted a reasonable level of performance for fourth grade students. The curriculum is designed so that the teacher can adapt its use to student(s) of widely varying ability. In other words, the curriculum is a tool that is capable of performing well over a broad range of student ability to help them achieve a higher minimum level of proficiency. The two major components of the curriculum are the student text (in two volumes) and the **Teacher's Guide**. These are the absolute minimum components for accomplishing the objective of teaching the concepts in the *Scope and Sequence*. Since this handbook was designed as an integral part of the curriculum, it is absolutely necessary to use the handbook. The handbook contains activities not found in the student texts that are essential to the accomplishment of the curriculum objectives. As you will see in the following sections, this **Teacher's Guide** contains a significant number of suggestions and helps for the teacher.

## THE DESIGN

Take a moment to look at the sample chart entitled, *Appearance of Concepts*, on page 22. Take note of how the curriculum concepts are developed. The first presentation is usually a brief familiarization. Then the basic teaching is accomplished as part of three to five lessons. The thoroughness of a presentation depends on how new and how important the concept is to the student's academic development.

### The Development

Each concept will be reviewed for three to five lessons after the complete presentation. For the next two months the concept will be presented every two weeks as a part of two or three lessons. After a break in presentation of a few weeks, the concept will be thoroughly reviewed as part of the lesson for three to five days. This will be followed by a period where the concept will be reviewed

every two weeks as part of two or three lessons. This progression continues until the student(s) have had the opportunity to thoroughly master the concept.

### **An Example**

Some mathematics curriculums might teach *division* for two months and not go back to it again. In this curriculum it will be introduced and practiced for two weeks. For the next two months, *division* will be presented every two weeks as a part of two or three lessons to give the student(s) continual practice to develop mastery of the concept. The third month will be considered a break from presenting the concept. In the fourth month, *division* will first be thoroughly reviewed and again practiced every two weeks as a part of two or three lessons. By having a series of practices every two weeks, the student(s) will retain what they have learned to a greater degree. Short periods of exposure repeated many times is much more effective than long periods with fewer exposures. Review the chart on page 22 to see how the concepts are developed.