



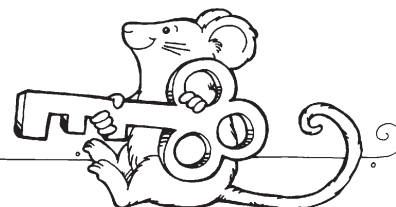
Introduction

The acquisition of computational skills is a key component of the mathematics curriculum. The National Council of Teachers of Mathematics (NCTM) in its *Principles and Standards for School Mathematics* (2000) advocates computational fluency, meaning that students are able to compute efficiently and accurately. In September 2006, NCTM released *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics* in which specific topics of study are outlined for each grade level. One of the grade 3 focal points is developing understanding of multiplication and strategies for basic multiplication facts.

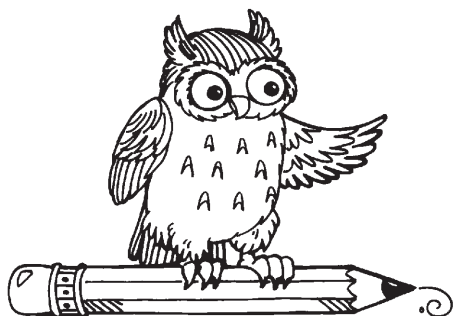
In reading, the goal is for students to be able to read for meaning and recall words quickly and with fluency. The same goal applies to the acquisition of multiplication facts in mathematics. Students should be able to recall facts from memory with quickness and accuracy, and they should also know what those facts mean. In order to achieve that goal, students must have mastery of counting skills including skip counting by 2's, 3's, 4's, 5's, and 10's to 100. Oral counting can be taught through the use of rhythmic counting, songs, raps, and CDs. A lack of counting skills makes the initial work with multiplication difficult.

The activities and games in *Specific Skills: Multiplication Facts Tips & Tricks* are aligned to both the NCTM Standards and Focal Points. The activities can be used for individual practice, whole group instruction, homework, or enrichment. The activities cover the following key concepts:

- Skip counting
- Repeated addition
- Arrays
- Specific strategies for memorizing the multiplication facts
- Multiplication practice



The main goal of *Specific Skills: Multiplication Facts Tips & Tricks* is for all students, including reluctant learners, to memorize and master the multiplication facts through 10. The authors advocate using the 11's and 12's to introduce two-digit by one-digit multiplication because students know all of the facts involving multiplication by 1's and 2's. This strategy will set the stage for the later study of multidigit multiplication.



A special section for teachers and parents on pages 8–11 outlines a suggested sequence for introducing the facts in a logical order that builds on students' prior knowledge of skip counting and repeated addition. The student activities and games provide meaningful practice to aid in the mastery of the basic multiplication facts. Breaking down the facts into smaller "chunks" increases the probability of success for all students. At the end of the book is a list of helpful Web sites for teachers, parents, and students. The sites can be used for lesson planning by teachers and include fun games for students to play.