



Introduction



The ability to recall answers for basic math facts quickly and accurately is an important and necessary skill for children as they acquire mathematical knowledge that will later support the learning of algebra. In March 2008, the National Mathematics Advisory Panel released its findings *Foundations for Success: The Final Report of the National Mathematics Advisory Panel* (U.S. Department of Education, Washington, DC). Regarding the commitment of math facts to long-term memory, the Panel stated “computational facility with whole number operations rests on the automatic recall of addition and related subtraction facts, and of multiplication and related division facts.” *Fact Mastery: Addition & Subtraction* provides the tools to help children reach this level of mastery recommended by the National Mathematics Advisory Panel.

Fact Mastery: Addition & Subtraction also supports the NCTM (National Council of Teachers of Mathematics) Standards and *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics* (2006) by offering materials that help students acquire strategies for learning the facts and understanding them. To achieve this goal, this resource book targets essential skill development by introducing addition and subtraction facts in a systematic manner and by providing specific activities for practicing them.

How to Use This Book

Listed below are a few suggestions for ways to use the reproducible materials provided in this resource book.

- **Using pretest/posttest assessment tools.** In each section of this book, you will find an assessment test, 49 problems in length, that can be completed during a predetermined amount of time or without a time constraint. Use each assessment test to identify which facts the student needs to master.
- **Introducing and using mental strategies to learn basic facts.** To help students acquire a greater understanding of numbers and relationships between numbers, it is recommended that students learn how to use mental strategies when memorizing the basic facts. Throughout the book, you will find pages for practicing various thinking strategies. The Show and Solve pages as well as the Think and Solve pages can be used as tools to introduce specific strategies and math facts. Additional information about the recommended strategies is provided on the introductory page for each section of the book. As new math facts are introduced, you might consider having students print them on index cards to make personal sets of flash cards.
- **Using the Fast Fact practice pages.** These half-page exercises can be used as warm-up activities during math class or by students who need additional practice before they are ready to take the Quick Check or 50 Nifty Facts timed tests. If necessary, have students complete the Fast Fact pages by alternating between top and bottom halves until they achieve mastery.
- **Setting up your math center and using the 15 easy-to-play partner games.** When making the math games, be sure to cut out and glue a copy of the game directions to the back of each game board for a quick reference. Store the materials in large zippered plastic bags. After specific mental strategies and facts have been introduced, use the partner games as a motivating tool to help students learn those facts.
- **Using the Quick Check and 50 Nifty Facts timed tests.** The Quick Checks are 36 problems in length and it is recommended that you allow students *two minutes* to complete each one. For each 50 Nifty Facts exercise, allow students *three minutes* to answer the problems. Depending on the capabilities of your students, predetermine the percentage of accuracy each student must achieve before moving on to another set of tests. If you are using the 50 Nifty Facts pages, alternate between tests A and B until students achieve the desired proficiency. Check off the tests as students complete them on a copy of the corresponding Progress Chart.