

Introduction

Recent federal and state initiatives have focused attention on mathematics instruction to improve student achievement substantially in our nation's schools. Since the passing of the *No Child Left Behind* legislation in particular, the demand on school districts to implement mathematics programs and practices that are grounded in scientifically based research with proven efficacy has been overwhelming. And this demand has extended to the educational publishers who develop mathematics programs. With this in mind, Houghton Mifflin Company has created this booklet to help district administrators and school supervisors understand how its new math program meets legislative mandates with a solid research base and documented efficacy.

The *No Child Left Behind Act* specifically seeks to improve mathematics achievement nationwide using scientifically based methods with long-term records of success to ensure global economic leadership in the 21st century. The ***Houghton Mifflin Math*** program exceeds this goal by not only incorporating years of significant mathematics research, but also by providing scientific studies that consistently document remarkable student progress. To help you better understand how ***Houghton Mifflin Math*** aligns with *No Child Left Behind* and other recent educational initiatives, this document is divided into two sections: The Research Base and Program Efficacy.

THE RESEARCH BASE

When judging a mathematics program, it is imperative to understand the distinction between theories or expert opinion on how students learn and the research base that provides evidence to support such theories and opinions. This document illustrates how ***Houghton Mifflin Math*** is based on the collective knowledge and expertise of noted scholars and educators as well as numerous research studies from various sources. Occasionally, the research was conflicting or inconclusive. In these cases, two critical sources were relied on: the National Council of Teachers of Mathematics' (NCTM) *Principles and Standards for School Mathematics* and *Adding It Up: Helping Children Learn Mathematics*, a summary by the National Research Council.

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PROGRAM EFFICACY

The efficacy of *Houghton Mifflin Math* has been well documented through several recent, large-scale studies using *Houghton Mifflin Mathematics*, the program on which *Houghton Mifflin Math* is based. All of these studies as well as future planned studies meet the various requirements of scientific research as set forth by the *No Child Left Behind* legislation, including rigorous, systematic, and objective methods, as well as replicable and valid results. This scientifically based research documents how *Houghton Mifflin Math* helps students achieve in mathematics by reaching their yearly progress goals and succeeding on state tests.

Refer to the following pages for an in-depth look at The Research Base and Program Efficacy for *Houghton Mifflin Math*. Together, we can ensure a future of mathematics success for our students and our nation.