



# New Research Results

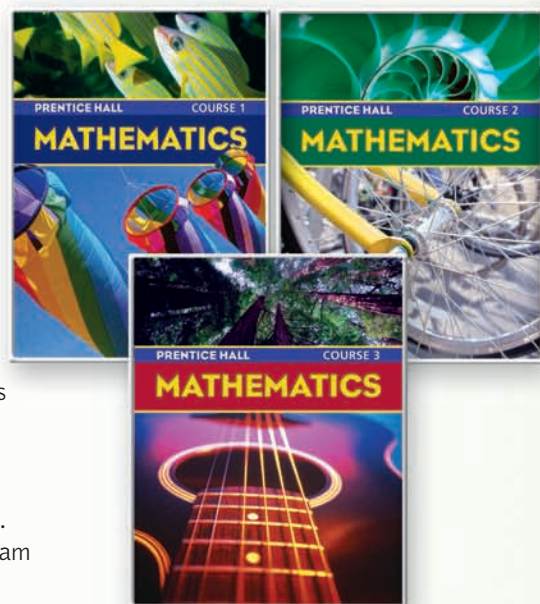
## Prentice Hall

# Mathematics, Grades 6-8

## Independent research confirms Middle School students using Prentice Hall Mathematics achieve greater success in mathematics

Results of independent research indicate that students using Prentice Hall Mathematics Course 2 showed significant improvement, outperforming students using other mathematics programs. The randomized control trial, conducted by PRES Associates, Inc., a national educational evaluation firm with central offices in Jackson, WY, confirmed students using the Prentice Hall curricula showed greater improvement from pre- to post-tests than their counterparts using other programs as measured by two different standardized assessments. Improvement was evident on all mathematics objectives measured. Additionally, the program was especially effective with low-performing students.

The study is part of a multi-year research effort commissioned by the publisher and is one of many slated to evaluate the effectiveness of Prentice Hall's educational materials across disciplines and grade levels. Participants represented a mix of urban and urban-fringe districts with diverse socio-economic, ethnic, and academic backgrounds.



### Among the key findings, PRES Associates reported:

- Student performance significantly improved from the beginning of the school year to its end as measured by the TerraNova Basic Multiple Assessment, chosen because it is aligned to national NCTM standards and has proven reliability and validity.
- Students using Prentice Hall Mathematics Course 2 improved to a greater extent in pre- to post-test scores than those using other programs.
- Assessment results suggest that Prentice Hall Mathematics Course 2 is particularly effective with low-performing students, as evidenced by the significant gains in low-performing student test scores.
- Prentice Hall Mathematics Course 2 students reported feeling significantly more comfortable with math than students using other programs. They also reported higher math aspirations (i.e., plans to take advanced math in high school).
- Teachers participating in the study reported that Prentice Hall Mathematics Course 2 provided significantly better assistance than other programs in the following areas (1) individualizing instruction, (2) reinforcing previously taught concepts, (3) providing test preparation, and (4) making connections to real-life.
- Teachers identified many aspects of the Prentice Hall program as effective, including the Guided Problem Solving workbook, Check Skills You'll Need exercises, and Check Understanding exercises.

The study was designed to fully meet the evidence criteria put forth by the What Works Clearinghouse, the Federal agency established in 2002 to provide the educators and the public with a trusted source of scientific evidence of what works in education. This study was designed so that accurate and appropriate inferences could be made regarding the effectiveness of the Prentice Hall Mathematics Course 2 program.

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### Executive Research Summary

#### Background

PRES Associates, Inc., an external, independent research firm with over 15 years of experience was commissioned to conduct a randomized control trial (RCT) on the effectiveness of the 2004 edition of Prentice Hall Mathematics Course 2 in helping seventh grade students attain critical mathematics skills.

#### Goals

The main goal of the study was to quantify the comparative impact of Prentice Hall Mathematics Course 2 on student achievement for seventh grade students. The results may be used to answer critical questions for potential users such as:

- Does mathematics ability improve as a result of participating in the Prentice Hall Mathematics Course 2 program?
- How well does the program work with various subgroups?
- Does using the program result in increased student achievement as compared to other types of mathematics programs?
- Does participation in the program result in other positive outcomes?

#### Study Design

Commencing in fall 2004, an RCT was designed to address the quality criteria as put forth by the What Works Clearinghouse. The final sample consisted of 453 seventh grade students in three geographically diverse schools located in Ohio and Virginia. Teachers were trained in implementation of the materials using the type of training that could reasonably be expected in real-world settings. The following types of information were part of the study:

- Pre/post student surveys collected information on student attitudes towards math.
- Pre/post teacher surveys gathered data on classroom practices and teacher perceptions of their math program(s).
- A battery of pre/post standardized assessment measures were administered to collect data on student learning. These assessments were aligned to national and NCTM standards and had proven reliability and validity.
- Classroom observations collected data on instructional activities occurring in treatment and control classrooms.
- Weekly teacher logs monitored fidelity of treatment implementation and what was occurring in control classrooms.

#### Results

- Mathematics performance significantly improved from pre- to post-test as measured by overall scores from standardized assessments.
- Results indicated that the program worked especially well with low-performing students.
- Results showed that the program worked equally well for students with varying demographic and academic characteristics.
- 60% of under-performing ("Step 1") students at the beginning of the year improved to "progressing," "nearly proficient," or "proficient" by the end of the year.
- Users of the program consistently out-performed students who used other programs.
- Students in classrooms using Prentice Hall Mathematics Course 2 had significantly better attitudes towards math and planned to take higher-level math classes (e.g., Advanced Algebra 2, Trigonometry) as compared to students in classrooms using other curricula.
- Teachers indicated that the Prentice Hall Mathematics Course 2 program provided significantly more assistance than other curriculum programs in the areas of individualizing instruction to below average students, assisting students' understanding of previously taught concepts, making real-life connections, and preparation of students for state or national exams.

Pearson Prentice Hall mathematics programs are backed by rigorous, independent research that supports their effectiveness in today's classrooms.

Visit [PHSchool.com/Research](http://PHSchool.com/Research) for the full report and additional research in support of Prentice Hall Mathematics.

