



in Grades 6-8



NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS



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Mathematical Connections

Navigating through Mathematical Connections in Grades 6–8

By David K. Pugalee, Fran Arbaugh, Jennifer M. Bay-Williams, Ann Farrell, Susann Mathews, and David Royster

Mathematics is a highly interconnected discipline. Teaching isolated concepts can limit students' understanding and diminish their interest. The NCTM Process Standards recommend highlighting mathematical connections by actively involving students in five processes: problem solving, reasoning and proof, communication, connections, and representation.

These processes help middle school students recognize connections among topics in mathematics and between mathematical ideas and diverse phenomena in other realms of experience. In turn, these connections help students become skillful problem solvers. Activities in this book invite students to connect ideas of number, algebra, geometry, measurement, and data analysis. Students discover the usefulness of mathematical modeling by solving problems in a variety of applied settings. For example, they investigate problems related to the outdoor storage of wheat, crime-scene forensics, and estimations of wildlife populations.

The Navigations Series translates *Principles and Standards for School Mathematics* into action. Each book includes practical, teacher-tested activities and a supplemental CD-ROM that features applets for students' use and resources for teachers' professional development.

NCTM offers a variety of professional development opportunities that are supported by the Navigations Series and also address other mathematical subjects. Visit www.nctm.org for more information on all of NCTM's resources, including professional development offerings and publications available in the online catalog.



The Navigating through Mathematical Connections in Grades 6-8 CD includes the following:

- Blackline masters
- Selected articles in PDF format
- Applets, and more

System Requirements:

- Macintosh® and Windows® compatible.
- Recommended browser is Internet Explorer 5.
- Adobe® Acrobat® Reader 4 or above is required for viewing PDFs.