



# NUMBERS

HELPING TEACHERS BUILD  
MATHEMATICS CONNECTIONS  
AND PROBLEM-SOLVING SKILLS  
**FOR EVERY STUDENT**



VOYAGER SOPRIS  
LEARNING™

## SUPPORTING STANDARDS-BASED MATHEMATICS INSTRUCTION FOR ELEMENTARY AND MIDDLE SCHOOL TEACHERS

*NUMBERS* complements any math curriculum and provides teachers with the skills to maximize instruction. These on-site, highly engaging, topic-based modules are founded on proven math instruction research. Each module was developed by national mathematics experts Dr. John Woodward, Dr. Michele Douglass, and Mary Stroh to present the flow of big ideas across grade levels.



### The five *NUMBERS* modules include:

#### MODULE 1

##### NUMBER SENSE (K–5)

- Developing Number Meaning
- Bridging to Number Relationships and Magnitude
- Building Operations of Numbers
- Using Numbers in Problem Solving

#### MODULE 2

##### FRACTIONS AND DECIMALS (3–6)

- Building Meaning of Fractions
- Understanding Operations on Fractions
- Building Meaning of Decimals with Connections to Fractions
- Understanding Operations on Decimals

#### MODULE 3

##### RATIOS AND PROPORTIONS (5–8)

- Multiplicative Thinking and Fraction Concepts
- Visual Representations and Problem Solving
- Connections to Geometry, Statistics and Probability, and Algebra

#### MODULE 4

##### ALGEBRAIC THINKING (5–8)

- Making Generalizations: Patterns and Connections to Arithmetic
- Tools for Understanding Integers, Expressions, and Equations
- Algebraic Thinking through Problem Solving

#### MODULE 5

##### DATA, MEASUREMENT, AND GEOMETRY (K–8, WITH EMPHASIS ON 3–8)

- Working with Data
- Visualizing and Reasoning about Shapes
- Measuring Dimensions
- Working with Points, Lines, and Angles



## What Teachers Learn

- Math concepts aligned with Common Core and state-specific standards
- Effective instructional strategies
- Ways to improve instructional delivery
- Differentiation strategies
- How to generate conversations about mathematical concepts
- Big ideas that build, progress, and deepen across grade levels

## Flexible Training Delivery

*NUMBERS* provides maximum flexibility for any school system through on-site offerings that can be combined to create a customized solution.

### On-site Professional Development

- Two days per module
- Nationally certified trainers
- Printed training material

### In-Classroom Coaching

- Integrate *NUMBERS* strategies into any math curriculum
- Incorporate *NUMBERS* strategies into student instruction

### Ongoing Implementation Support

- Long-term collaboration
- Support for Professional Learning Communities
- Planning tools
- Assessment tools

*NUMBERS* provides professional development and support related to the instructional planning, assessment, and differentiation specific to rigorous state and national math standards for grades K–8.

## NUMBERS Authors



**John Woodward, Ph.D.**, is a distinguished professor and dean in the School of Education at the University of Puget Sound. He has written over 80 chapters and journal articles published in the United States and internationally. In addition to *TransMath*—an intervention curriculum for low-achieving middle school math students—he has coauthored four technology-based instructional programs. He has acted as the principal or coprincipal investigator for a number of significant research grants from the U.S. Department of Education. He taught for five years in Alaska, and he began his academic career codirecting a nonprofit research institute that focused on bilingual education, instructional interventions, technology-based instruction in math and science, and models for professional development. Most recently, he was the chair of the Institute of Education Science's WWC Practice Guide titled *Improving Mathematical Problem Solving in Grades 4 through 8*.



**Michele Douglass, Ph.D.**, is the president of MD School Solutions, Inc., a company that contracts with school districts on content and pedagogy with teachers and leaders. She holds her doctorate in curriculum and instruction. Her experience ranges from math instructor to director of Curriculum and Instruction at Educational Testing Services. She has authored several math, professional development, and technology programs. She consults in public schools on a regular basis.



**Mary Stroh, M.S.**, is coauthor of *TransMath*. She has a Bachelor of Science from Central Michigan University in computer science, with a minor in mathematics. She began her research career as a systems engineer for Electronic Data Systems (EDS). Beginning in the late 1990s, she was a research assistant on federally funded intervention projects in mathematics for students with disabilities and project coordinator and curriculum developer on two federally funded research grants from the U.S. Department of Education, Office of Special Education Programs.

# NUMBERS

## PROFESSIONAL DEVELOPMENT FOR TODAY'S MATH STANDARDS

### *NUMBERS* is ...

- Aligned with rigorous state math standards, including CCSS
- Supportive of Professional Learning Communities (PLCs)
- Aligned with National Staff Development Council (NSDC) standards
- Measured using a nationally validated professional development effectiveness methodology



Visit [www.voyagersopris.com/numbers](http://www.voyagersopris.com/numbers) to get complimentary *NUMBERS* module samples and hear from the authors on key aspects of meaningful math instruction.



VOYAGER SOPRIS  
LEARNING™

[www.voyagersopris.com](http://www.voyagersopris.com) / 800.547.6747

