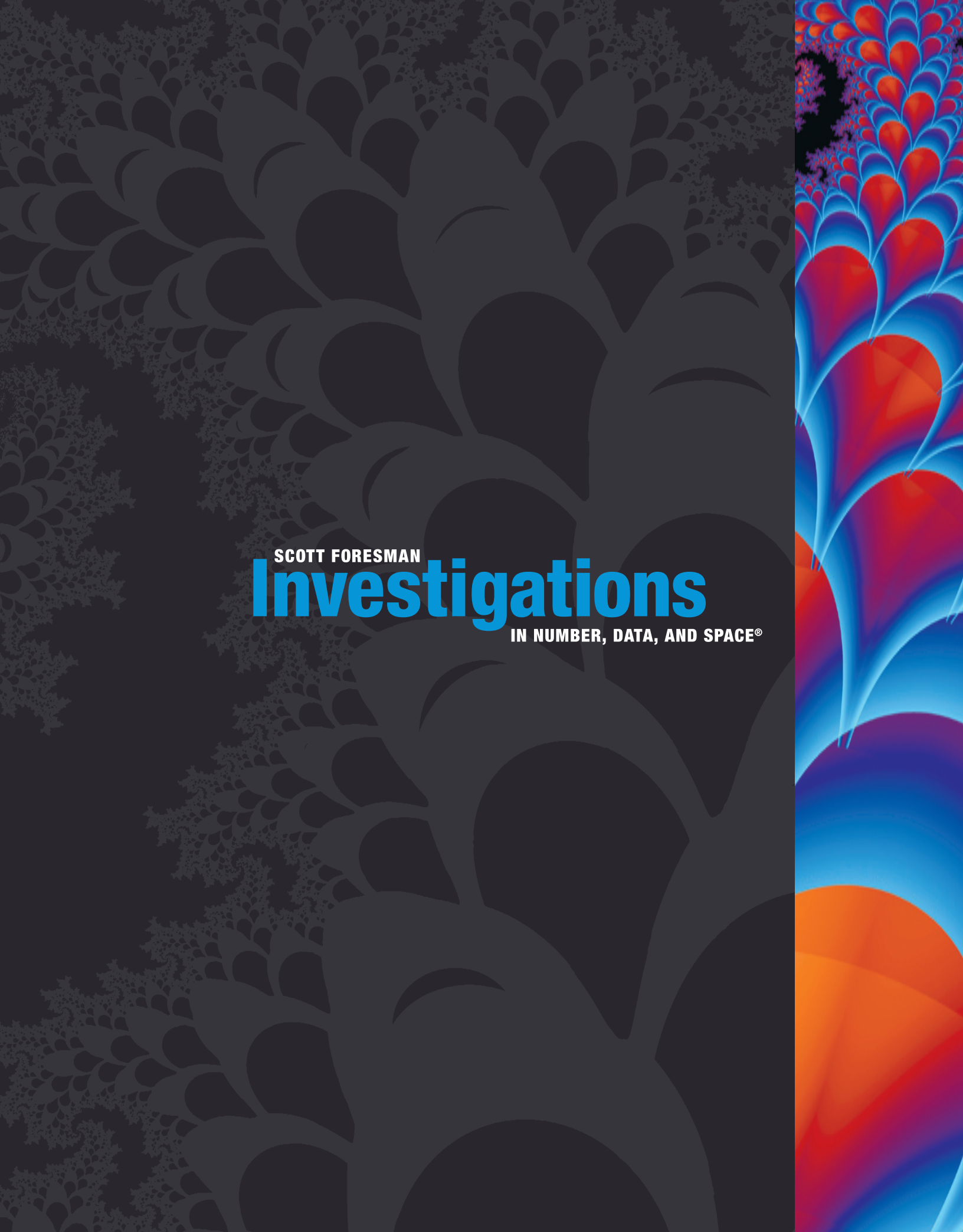
SCOTT FORESMAN
Investigations
IN NUMBER, DATA, AND SPACE®

Program Philosophy

Investigations in Number, Data, and Space® Second Edition ©2008 is a Kindergarten through Grade 5 mathematics curriculum designed to engage students in making sense of mathematical ideas. Six major goals guided the development and revision of the *Investigation in Number, Data, and Space* curriculum. The curriculum is designed to:

- Support students to make sense of mathematics and learn that they can be mathematical thinkers
- Focus on computational fluency with whole numbers as a major goal of the elementary grades
- Provide substantive work in important areas of mathematics—rational numbers, geometry, measurement, data, and early algebra—and connections among them
- Emphasize reasoning about mathematical ideas
- Communicate mathematics content and pedagogy to teachers
- Engage the range of learners in understanding mathematics

Underlying these goals are three guiding principals that are touchstones for the *Investigations* team as they approach both students and teachers as agents of their own learning:

1. *Students have mathematical ideas.* Students come to school with ideas about numbers, shapes, measurements, patterns, and data. If given the opportunity to learn in an environment that stresses making sense of mathematics, students build on the ideas they already have and learn about new mathematics they have never encountered. Students learn that they are capable of having mathematical ideas, applying what they know to new situations, and thinking and reasoning about unfamiliar problems.
2. *Teachers are engaged in ongoing learning* about mathematics content, pedagogy, and student learning. The curriculum provides material for professional development, to be used by teachers individually or in groups, that supports teachers' continued learning as they use the curriculum over several years. The *Investigations* curriculum materials are designed as much to be a dialogue with teachers as to be a core of content for students.
3. *Teachers collaborate with the students and curriculum materials* to create the curriculum as enacted in the classroom. The only way for a good curriculum to be used well is for teachers to be active participants in implementing it. Teachers use the curriculum to maintain a clear, focused, and coherent agenda for mathematic teaching. At the same time, they observe and listen carefully to students, try to understand how they are thinking, and make teaching decisions based on these observations.

Investigations is based on experience from research and practice, including field-testing that involved documentation of thousands of hours in classrooms, observations of students, input from teachers, and analysis of student work. As a result, the curriculum addresses the needs of real students in a wide range of classrooms and communities. The investigations are carefully designed to invite all students into mathematics – girls and boys; members of diverse cultural, ethnic, and language groups; and students with a wide variety of strengths, needs, and interests.

Based on this extensive classroom testing, the curriculum takes seriously the time students need to develop a strong conceptual foundation and skills based on that foundation. Each curriculum unit focuses on an area of content in depth, providing time for students to develop and practice ideas across a variety of activities and contexts that build on each other. Daily guidelines for time spent on class sessions, Classroom Routines (K–3), and Ten-Minute Math (3–5) reflect the commitment to devoting adequate time to mathematics each school day.