

Connections to NCTM's *Principles and Standards for School Mathematics* (2000)

Page	Grade level*	Strand	Focus	Type of Activity
6	7	Number and Data	Interpret comparative statements involving ratios.	pre-assessment embedded in lesson
10	8	Measurement	Solve problems involving volume and proportional reasoning.	lesson connected to book <i>Counting on Frank</i>
24	6	Number	Multiply with decimals.	problem discussion
28	8	Algebra	Create and analyze linear equations to represent situations.	lesson tied to buying school lunches
34	8	Algebra	Model linear situations with tables, graphs, and equations.	lesson built on parking receipts
40	8	Algebra	Pose problems related to tables, graphs, or equations.	lesson focusing on posing problems
54	6	Geometry	Describe and classify polygons.	polygon-sorting activity
56	6–8	Number and Algebra	Demonstrate number sense.	interview questions
59	6	Number	Demonstrate understanding of meaning of percent.	open-ended tasks

(Continued)

*Single-grade levels identify the grade where the lesson or task was implemented during the development of this book. Many of these ideas can be applied in other grades as well.

Page	Grade level*	Strand	Focus	Type of Activity
73	7	Geometry	Identify attributes of similar triangles, including scale factors.	post-assessment idea
82	8	Measurement	Develop and use formulas to find area of complex polygons.	lesson using geoboards
87	6–8	Data and Algebra	Organize information and look for patterns.	problem-solving task: Barrel of Monkeys
97	7	Number	Compute with fractions, decimals, and percents to solve problems.	lesson involving number puzzles
110	8	Measurement and Geometry	Applying the Pythagorean theorem to find volumes and surface areas.	tiered logic problems
111	6–8	Data	Collect, display, and analyze data.	tiered survey tasks
115	6–8	Algebra	Represent, analyze, and generalize patterns.	tiered tasks involving visual patterns
115	6–8	Algebra and Number	Interpret information in a graph to solve problems.	tiered tasks related to a trip to an ice cream shop
125	8	Algebra	Find and generalize patterns in nonlinear data.	lesson involving the Tower of Hanoi
135	6	Measurement	Understand units of measure and convert within a measurement system.	activities to serve multiple intelligences
158	7	Geometry	Classify angles.	computer applet Angles
161	7	Number	Develop meaning for integers.	student posts real-world connections on a class website
165	8	Data	Relate basic concepts of probability.	student-created concept web lesson

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183	7	Data	Find, use, and interpret measures of central tendency.	choices in math workshop
187	8	Algebra and Data	Recognize linear, quadratic, and exponential functions.	conducting experiments with bouncing balls
190	6–8	Number	Understand large numbers.	collecting a million pennies
191	8	Algebra	Use systems of linear equations.	choices on a menu board
194	6	Geometry	Examine symmetry.	choices on a menu list focused on symmetry and art
195	6–8	Number	Compute with fractions.	choices in a Think-Tac-Toe format
196	7	Data	Make real-world connections to ideas of probability.	choices in a RAFT format
196	7	Number	Use proportional reasoning.	choices within learning stations involving modeling
200	8	Algebra and Number	Explore patterns and make generalizations.	choices with learning stations involving Fibonacci numbers
238	6–8	Number	Compute with decimals, fractions, and percents.	math games

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