

***A Comprehensive Approach to
Balanced Mathematics***

***MATHEMATICS PLANNING FOR SIXTH GRADE
2007 Edition***

6



**Department of
Education**

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Chancellor

COURSE 1 PRE-TEST
AUXILIARY SUPPORT MATERIALS CORRELATION

<i>QUESTIONS</i>	<i>TOPIC</i>	<i>REFRESHER WORKSHEET</i>	<i>HOT WORDS HOT TOPICS</i>	<i>SECTION</i>	<i>PAGE</i>
1–3	Multiplication and division of whole numbers	1, 2			
4–9	Addition and subtraction of decimal	3	Adding and subtracting decimals	2.6	132–133
10–15	Addition and subtraction of fractions with like denominators	5	Addition and subtraction of fractions	2.3	112–114
16–18	Converting decimals to fractions	4	Fractions and decimals	2.9	159–160
19–21	Linear measurement	6	Systems of measurement Length and distance	8.1 8.2	352–353 356–357
22–23	Perimeter of polygons	7	Perimeter	7.4	320–321
24–25	Area of rectangles	8	Area	7.5	324–325
26–31	Reading and interpreting graphs Bar graphs Pictographs	9 (p.12) 9 (p.13)	Collecting data Displaying data Analyzing data	4.1 4.2 4.3	184–189 197–198 202–203
32–35	Coordinate geometry	10	Graphing on the coordinate plane	6.6	282–284
36–37	Functions	11	Graphing on the coordinate plane	6.7	300–302

Teaching with *Impact Mathematics*

As you move through this document and the *Impact* materials, you will note many recurring themes and underlying programmatic structures that will support your classroom teaching:

- A. The Grades 6 through 8 program is a comprehensive curriculum that completes a full year of algebra by the end of Grade 8.
- B. *Impact Mathematics* is a standards-based, integrated curriculum that includes strands on number and operations, proportional reasoning, geometry, probability and data, with a focus on the development of algebraic thinking.
- C. There is a balance of basic skills and conceptual understanding; students build new mathematical ideas and at the same time practice needed procedures.
- D. The curriculum is centered around problem sets that students work on individually or in groups. Many of the problems are open-ended, allowing students to choose or develop solution strategies.
- E. Students are asked to make conjectures based on patterns they observe and to develop convincing mathematical arguments.
- F. *Impact Mathematics* provides opportunities for students to reflect upon, critique and communicate their ideas.
- G. The concepts in each chapter connect to and build on concepts developed in earlier chapters and courses.
- H. There is an emphasis on a variety of mathematical representations, as well as modeling.
- I. Informal to formal development of concepts makes mathematics accessible and appropriate for middle grades students.
- J. There is strong content progress from grade to grade with minimal reteaching of topics. Important topics are revisited in greater depth and formality.
- K. The contexts used for developing concepts and practicing skills include real-world applications, as well as mathematical settings.
- L. To maintain students' ongoing interest in all areas of mathematics, *Impact Mathematics* uses narrative and realistic contexts, personalization in the form of cartoons in which middle grades students explain how they approach problems, and opportunities for students to choose or create their own problems.
- M. Manipulatives and calculators are used to support the content learning only when appropriate. Students need and gain experiences with pencil and paper along with graphing technology.
- N. The teaching process is designed around a three-step instructional cycle: Introduce, Develop, and Assign & Assess.
- O. The curriculum balances structured learning, direct instruction, and creative problem-solving. Student discovery plays as significant a role in the learning process as teacher-directed instruction.
- P. Assessment tools are broad, encompassing the processes of problem solving, reasoning, communication, connections, concepts, applications, representational strategies and procedures.
- Q. All suggested lessons should be taught. Those lessons identified as RECOMMENDED may be taught as introductory in approach. Those lessons identified as SUGGESTED may be taught as enrichment lessons if time permits.

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
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CHAPTER 1: ALL ABOUT PATTERNS

Algebraic Reasoning: *Patterns and Numeric Forms—Develop; Properties and Rules—Develop*

Two Dimensional Shapes: *Polygons, Quadrilaterals, Triangles—Develop*

WEEK 1	<p>Administer <u>Pre-Chapter One Assessment</u>.</p> <p>1.1 Looking for Patterns</p> <p>Recognizing, describing, and extending numeric and visual patterns.</p> <p><i>Suggested Per Period Pacing:</i></p> <ol style="list-style-type: none"> Explore, p.4; Investigation 1: PS A, pp. 5–6. Investigation 1: T&D, p. 6; PS B, pp. 7–9. Investigation 1: S&S, p. 9; IYOW, p. 12, QQ, p. A340. <p>Note: The recommended pacing is based on the mandated 375 minutes or seven to eight 45–60 minute periods per week.</p> <p>Note: Quick Quizzes and Pre-chapter Assessments can be found in Impact Assessment Resources, Volumes A and B.</p>	<p><i>For students who have difficulty with Course 1 Pretest:</i> Refer to Course 1 Support Materials, found on page 2 of this book.</p> <p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>7.3: Symmetry and Transformations, pp. 314–319.</p> <p>Skills Intervention Workbook</p> <p>pp. 175–176.</p>	<p>ALGEBRA STRAND</p> <p><i>Students will recognize, use, and represent algebraically patterns, relations, and functions.</i></p> <p>Patterns, Functions, and Relations</p> <p>5.A.7 Create and explain patterns and algebraic relationships (i.e., 2, 4, 6, 8 ...) algebraically: 2n (doubling). Standardized test review 6.6: Graphing on the Coordinate Plane, pp. 282-284.</p>	
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WEEKS 1–2	<p>1.2 Following Rules</p> <p>Following common rules and rules for sequences.</p> <p>Applying the order of operations.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>4. T&D, p. 14; Investigation 1: PS A, p.15; PS B, p. 16.</p> <p>5. PS C, pp. 17–18; S&S, p. 18.</p> <p>6. Investigation 2: PS D, p. 20.</p> <p>7. PS E, p. 21; PS F, p. 22; S&S, p. 22.</p> <p>8. IYOW, p. 26.</p> <p>9. QQ, TE, p. A341.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook pp. 15–16.</p> <p>Hot Words, Hot Topics 1.3: Order of Operations, pp. 78–79. 3.1: Powers and Exponents, pp.168-174.</p> <p>Skills Maintenance Workbook pp. 52–55.</p>	<p>NUMBER AND NUMERATION STRAND</p> <p>Operations <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three).</p> <p>6.N.25 Evaluate expressions having exponents where the power is an exponent of one, two, or three.</p> <p>Estimation <i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p> <p>ALGEBRA STRAND</p> <p>Variables and Expressions <i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>5.A.2 Translate simple verbal expressions into algebraic expressions (POST MARCH in Grade 5).</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math, Grade 5</p> <p>7.1: Exponential Notation.</p> <p>7.2: Exponential Notation for Powers of 10.</p>

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WEEKS 1–2 (continued)			<p>Variables and Expressions <i>Students will perform algebraic procedures accurately.</i></p> <p>5.A.3 Substitute assigned values into variable expressions and evaluate using order of operations (POST MARCH in Grade 5).</p> <p>Equations and Inequalities</p> <p>6.A.6 Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.).</p>	

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WEEKS 2–3	<p>1.3 Writing Rules for Patterns</p> <p>Writing rules that connect two quantities.</p> <p><i>Suggested per Period Pacing:</i></p> <p>10. Explore, p. 28.</p> <p>11. Investigation 1: PS A, p. 30.</p> <p>12. T&D, p. 30; PS B, p. 31; S&S, p. 31.</p> <p>13. Investigation 2: PS C, pp. 32–34.</p> <p>14. PS D, p. 35; S&S, p. 35.</p> <p>15. IYOW, p. 40; QQ, p. 41 TE.</p>		<p>ALGEBRA STRAND</p> <p>Variables and Expressions</p> <p><i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions.</p> <p>Variables and Expressions</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three) (POST MARCH IN GRADE 6).</p> <p>PROBLEM SOLVING STRAND</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.12 Use trial and error, and the process of elimination to solve problems.</p>	

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WEEKS 3–4	1.4 Patterns in Geometry Identifying, naming, and classifying polygons. <i>Suggested Per Period Pacing:</i> 16. E, p. 42; Investigation 1: T&D, p. 42; E, p. 44. 17. PS A, p. 45; S&S, p. 46. 18. Investigation 2: T&D, p. 48; PS B, p. 48. 19. PS C, p. 49; S&S, p. 49. 20. Investigation 3: T&D, p. 51. 21. PS D, pp. 52–53; S&S, p. 54. 22. Investigation 4: PS E, pp. 55–56. 23. T&D, p. 56; PS F, p. 57; S&S, p. 57. 24. {Suggested: Lab Investigation, pp. 58–60.} 25. IYOW, p. 67; QQ, p. 68 TE.	<i>For additional practice or homework:</i> Skills Intervention Workbook pp. 83–88. Hot Words, Hot Topics 7.1: Naming and Classifying Angles and Triangles, pp. 296–303. 7.2: Naming and Classifying Polygons and Polyhedrons, pp. 304–313.	STATISTICS AND PROBABILITY Collection of Data <i>Students will collect, organize, display, and analyze data.</i> 6.S.3 Construct Venn diagrams to sort data (POST MARCH IN GRADE 6). Geometric Relationships <i>Students will identify and justify geometric relationships, formally and informally.</i> 5.G.6 Classify triangles by properties of their angles and sides. 5.G.7 Know that the sum of the interior angles of a triangle is 180 degrees. 5.G.8 Find a missing angle when given two angles of a triangle. Transformational Geometry <i>Students will apply transformations and symmetry to analyze problem solving situations.</i> 5.G.11 Identify and draw lines of symmetry of basic geometric shapes.	LP: Everyday Math, Grade 5 3.7: Properties of Polygons. 3.9: Angles of Polygons. CC: www.learner.org/channel/courses/learningmath/geometry/session2/index.html
	Review and Self-Assessment <i>Suggested Per Period Pacing:</i> 26. Review & Self-Assessment, pp. 69–73. 27. Chapter 1 Test.			

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CHAPTER 2: ALL ABOUT NUMBERS

Numbers and Number Sense: *Whole Numbers, Signed Numbers—Develop*
 Rationals and Irrationals: *Fractions and Decimal Concepts—Develop*
 Algorithms and Operations: *Fractions, Decimals—Review & Extend*
 Algebraic Reasoning: *Patterns and Numeric Forms—Develop*

WEEKS 5–6	<p>Administer <u>Pre-Chapter Two Assessment</u>.</p> <p>2.1 Factors and Multiples</p> <p>Understanding and applying concepts related to factors and multiples.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>28. T&D, p. 76; Investigation 1: PS A, p. 77.</p> <p>29. Investigation 1: PS B, p. 78; PS C, p. 78; S&S, p. 79.</p> <p>30. Investigation 2: PS D, pp. 79–80.</p> <p>31. Investigation 2: PS E, p. 81; S&S, p. 81.</p> <p>32. Investigation 3: Explore, p. 82; PS F, p. 83.</p> <p>33. Investigation 3: E, p. 83; PS G, p. 84; S&S, p. 84.</p> <p>34. Investigation 4: PS H, p. 85; E, p. 85; PS I, p. 86.</p> <p>35. [Suggested: Investigation 4: PS J, pp. 86–87]; S&S, p. 87; {Suggested: Lab Investigation, pp. 88–89}; QQ, p. 95 TE.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 17: pp. 33–40.</p> <p>Hot Words, Hot Topics</p> <p>1.4: Factors and Multiples, pp. 80–87.</p> <p>Skills Maintenance Workbook</p> <p>pp. 58–61. pp. 80–83.</p>	<p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.2 Define and identify the commutative and associative properties of addition and multiplication.</p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p>7.N.8 Find the common factors and greatest common factors of two or more numbers.</p> <p>7.N.9 Determine multiples and least common multiple of two or more numbers.</p> <p>7.N.10 Determine the prime factorization of a given number and write in exponential form.</p> <p>Note: These concepts are introduced in Grade 6 to prepare students for later mastery.</p> <p><i>Students will understand meanings of operations and procedures and how they relate to one another.</i></p> <p>6.N.25 Evaluate expressions having exponents where the power is an exponent of one, two, or three.</p>	<p>LP: Everyday Math, Grade 5</p> <p>1.9: Factor Strings and Prime Factorizations, pp. 50-55.</p> <p>12.1: Factor trees, pp. 870-875.</p>
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WEEK 6	<p>2.2 Patterns in Fractions Finding equivalent fractions and comparing fractions.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>36. T&D, p. 96; Investigation 1: PS A, p. 97; E, p. 97; PS B, p. 98.</p> <p>37. Investigation 1: S&S, p. 98; Investigation 2: PS C, p. 99.</p> <p>38. Investigation 2: T&D, p. 100; PS D, p. 101; S&S, p. 101.</p> <p>39. Investigation 3: PS E, p. 102; T&D, p. 103; PS F, p. 103; S&S, p. 103.</p> <p>40. Investigation 4: T&D, p. 104; PS G, pp. 104–105; T&D, p. 105.</p> <p>41. Investigation 4: PS H, p. 105; S&S, p. 105; IYOW, p. 109; QQ, p. 111 TE.</p> <p>42. Mid-chapter test.</p> <p>Note: The mid-chapter test is optional but may be beneficial since this is a long chapter.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 21: Simplifying Fractions, pp. 41–42.</p> <p>Skill 22: Mixed Numbers and Improper Fractions, pp. 49–50.</p> <p>Hot Words, Hot Topics</p> <p>2.1: Fractions and Equivalent Fractions, pp. 98–106.</p> <p>2.2: Comparing and Ordering Fractions, pp. 108–110.</p> <p>Skills Maintenance Workbook pp. 68–73.</p>	<p>REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.7 Use mathematics to show and understand physical phenomena (e.g., determine the perimeter of a bulletin board).</p> <p>NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.7 Express equivalent ratios as a proportion.</p> <p>6.N.14 Locate rational numbers on a number line (including positive and negative).</p> <p>6.N.15 Order rational numbers (including positive and negative).</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p>	<p>LP: Everyday Math, Grade 5</p> <p>5.4: Two Rules for Finding Equivalent Fractions.</p> <p>8.1: Comparing Fractions.</p>

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WEEK 7–8	<p>2.3 Patterns in Decimals Understanding and comparing decimals.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>43. Explore, p. 112; Investigation 1: E, p. 113; PS A, p. 114.</p> <p>44. Investigation 1: PS B, p. 115; PS C, p. 116; S&S, p. 117.</p> <p>45. Investigation 3: PS E, p. 120; PS F, pp. 121–122; S&S, p. 122.</p> <p>46. IYOW, p. 125; QQ, p. 127 TE.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 1: Large Numbers, pp. 1–2.</p> <p>Skill 15: Multiplying by Powers of Ten, pp. 29–30.</p> <p>Skill 16: Dividing by Powers of Ten, pp. 31–32.</p> <p>Hot Words, Hot Topics</p> <p>2.5: Naming and Ordering Decimals, pp. 126–130.</p> <p>3.1: Powers of Ten, p. 171.</p> <p><i>Standardized test review:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 58: Metric Units of Measure.</p> <p>Skill 59: Customary Units of Measure.</p>	<p>PROBLEM SOLVING STRAND <i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.12 Use trial and error and the process of elimination to solve problems.</p> <p>NUMBER SENSE AND OPERATION STRAND <i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.1 Read and write whole numbers to trillions.</p> <p>6.N.14 Locate rational numbers on a number line (including positive and negative).</p> <p>6.N.15 Order rational numbers (including positive and negative).</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents, 0 to 100).</p>	<p>LP: Everyday Math, Grade 5 Ordering and Comparing Decimals, pp. 304.</p>

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WEEK 7–8	<p>2.4 Fractions and Decimals Converting decimals to fractions and fractions to decimals.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>47. T&D, p. 128 Investigation 1: PS A, pp. 128–130.</p> <p>48. Investigation 1: PS B, pp. 130–131; S&S, p. 131.</p> <p>49. Investigation 2: T&D, p. 131; E, p. 132; PS C, p. 132; T&D, p. 133.</p> <p>50. Investigation 2: PS D, p. 133; S&S, p. 134.</p> <p>51. Investigation 3: PS E, pp. 134–135; {Suggested: PS F, p. 136; S&S, p. 136.}</p> <p>52. IYOW, p. 139; QQ, p. 141 TE.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 24: Changing Fractions to Decimals, pp. 47–48.</p> <p>Hot Words, Hot Topics</p> <p>2.9: Fractions and Decimals, pp. 159–160, p. 161, #19–28.</p>	<p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.14 Locate rational numbers on a number line (including positive and negative).</p> <p>6.N.15 Order rational numbers (including positive and negative).</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.20 Represent fractions as terminating or repeating decimals.</p> <p>6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents, 0 to 100).</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p>	<p>LP: Everyday Math, Grade 5</p> <p>5.5: Fractions and Decimals: Part 1.</p> <p>5.6: Fractions and Decimals: Part 2.</p> <p>5.7: Fractions and Decimals: Part 3.</p>

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WEEKS 9	<p>2.5 Negative Numbers Understanding negative numbers and opposites.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>53. Explore, p. 142; Investigation 1: PS A, p. 144.</p> <p>54. Investigation 1: T&D, p. 144; PS B, p. 145.</p> <p>55. Investigation 1: S&S, p. 145; IYOW, p. 146; QQ, p. 147 TE.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>1.5: Positive and negative integers, p. 88; Opposites of Integers and Absolute Value, pp. 88–89.</p>	<p>REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.7 Use mathematics to show and understand physical phenomena (e.g., determine the perimeter of a bulletin board).</p> <p>NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p>6.N.13 Define absolute value and determine the absolute value of rational numbers (including positive and negative).</p> <p>6.N.14 Locate rational numbers on a number line (including positive and negative).</p> <p>6.N.15 Order rational numbers (including positive and negative).</p>	<p>LP: Everyday Math, Grade 5</p> <p>7.7: Using Negative Numbers.</p> <p>7.7: Addition of Positive and Negative Numbers.</p> <p>7.9: Subtraction of Positive and Negative Numbers.</p> <p>7.10: Using a Slide Rule to Add and Subtract.</p> <p>7.11: Calculator Practice: Working with Negative Numbers.</p>
	<p>Review and Self-Assessment <i>Suggested per Period Pacing:</i></p> <p>56. Review & Self-Assessment, pp. 148–151.</p> <p>57. Chapter 2 Test.</p>			

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CHAPTER 3: WORKING WITH FRACTIONS AND DECIMALS

Rationals and Irrationals: *Fractions and Decimal Concepts—Develop*

Algorithms and Operations: *Fractions, Decimals—Review & Extend*

WEEKS 9	3.1 Adding and Subtracting Fractions Adding and subtracting fractions and mixed numbers. <i>Suggested Per Period Pacing:</i> 58. T&D, p. 154; Investigation 1: PS A, p. 155. 59. Investigation 1: E, p. 156; PS B, pp. 156–157; S&S, p. 157. 60. Investigation 2: Explore, p. 157; PS C, p. 158; PS D, pp. 158. 61. Investigation 2: E, p. 159; PS E, p. 159; {Suggested: PS F, p. 160; S&S, p. 160.} 62. Investigation 3 (All). 63. QQ, p. 171 TE; {Suggested: Lab Investigation, pp. 164–165}. Note: Lab Investigation is optional, but provides practice in using a fraction calculator.	<i>For additional practice or homework:</i> Skills Intervention Workbook Skill 21: Simplifying Fractions, p. 41. Skill 26: Adding Fractions, pp. 51–52. Skill 27: Subtracting Fractions, pp. 53–54. Hot Words, Hot Topics 2.3: Addition and Subtraction of Fractions, pp. 112–118. Skills Maintenance Workbook p. 71.	PROBLEM SOLVING STRAND <i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i> 6.PS.12 Use trial and error and the process of elimination to solve problems. REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i> 6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$). NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i> 6.N.16 Add and subtract fractions with unlike denominators.	LP: Everyday Math, Grade 5 5.2: Mixed Numbers. 6.8: Using a Slide Rule to Add and Subtract Fractions. 8.2: Adding Mixed Numbers. 8.3: Subtracting Mixed Numbers.
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 10	<p>3.2 Multiplying and Dividing with Fractions</p> <p>Multiplying fractions and mixed numbers.</p> <p>Dividing fractions and mixed numbers.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>64. Explore, p. 172; Investigation 1: PS A, p. 173.</p> <p>65. Investigation 1: T&D, p. 173; PS B, p. 174; PS C, p. 174; S&S, p. 175.</p> <p>66. Investigation 2 (All).</p> <p>67. Investigation 3 (All).</p> <p>68. Investigation 4 (All).</p> <p>69. Investigation 5: Explore, p. 185; E, p.186; PS L, p. 187.</p> <p>70. Investigation 5: T&D, p. 187; E, p. 188; PS M, p. 188; S&S, p. 188.</p> <p>71. IYOW, p. 196; QQ, p. 197 TE, A351 TE.</p> <p>Note: Assign S&S, p. 175, as part of homework if not enough time in class.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 28: Multiplying Fractions, pp. 55–56.</p> <p>Skill 29: Multiplying Whole Numbers by Fractions, pp 57–58.</p> <p>Skill 30: Dividing Fractions, pp. 59–60.</p> <p>Hot Words, Hot Topics</p> <p>2.4: Multiplication and Division of Fractions, pp. 120–124.</p>	<p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and numbers systems.</i></p> <p>6.N.2 Define and identify the commutative and associative properties of addition and multiplication.</p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.17 Multiply and divide fractions with unlike denominators.</p> <p>6.N.18 Multiply and divide mixed numbers with unlike denominators.</p> <p>6.N.19 Identify the multiplicative inverse (reciprocal) of a number.</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p> <p>GEOMETRY STRAND</p> <p><i>Students will use the visualization and spatial reasoning to analyze characteristics and properties of geometric shapes.</i></p> <p>6.G.2 Determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, and trapezoids), and develop formulas.</p>	<p>LP: Everyday Math, Grade 5</p> <p>8.5: Fractions of Fractions.</p> <p>8.6: An Area Model for Fraction Multiplication.</p> <p>8.7: Multiplication of Fractions and Whole Numbers.</p> <p>8.8: Multiplication of Mixed Numbers.</p>

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 11–12	3.3 Multiplying and Dividing with Decimals Multiplying and dividing decimals. <i>Suggested Per Period Pacing:</i> 72. T&D, p. 198. 73. Investigation 1: PS A, p. 199; {Suggested PS B, p. 200; S&S, p. 201.} 74. Investigation 2: T&D, p. 201; PS C, pp. 201-2; T&d, p. 202-3; {Suggested, PSd, p. 203; S&S, p. 203} 75. Investigation 3: T&D, p. 204; PS F, p. 205; PS G, p. 206; S&S, p. 206. 76. Investigation 4: PS H, p. 207; E, p. 208; PS I #1-4, p. 208. 77. {Suggested: Investigation 4: E, p. 209; PS J, p. 209; S&S, p. 210.} 78. Investigation 5 (All). 79. QQ, p. 220 TE; IYOW, p. 217.	<i>For additional practice or homework:</i> Skills Intervention Workbook Skill 12: Multiplying Whole Numbers and Decimals, pp. 23–24. Skill 13: Dividing Decimals, pp. 25–26. Hot Words, Hot Topics 2.6: Multiplication and Division of Decimals, pp. 134–139. <i>Standardized test review:</i> Skills Intervention Workbook Skill 14: Estimating Products and Quotients, pp. 27–28.	PROBLEM SOLVING STRAND <i>Students will solve problems that arise in mathematics and in other contexts.</i> 6.PS.8 Select an appropriate representation of a problem. REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i> 6.R.7 Use mathematics to show and understand physical phenomena (e.g., determine the perimeter of a bulletin board). NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i> 6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents, 0 to 100). <i>Students will compute accurately and make reasonable estimates.</i> 6.N.27 Justify the reasonableness of answers using estimation (including rounding).	LP: Everyday Math, Grade 5 2.8: Multiplication of Whole Numbers and Decimals. 4.5: Division of Decimal Numbers.
	Review and Self-Assessment <i>Suggested Per Period Pacing:</i> 80. Begin Review and Self-Assessment, p. 22. 81. Review & Self-Assessment, pp. 221–223. 82. Chapter 3 Test.			

PACING	IMPACT TEXTBOOK PS: Problem Set QQ: Quick Quiz IYOW: In Your Own Words T&D: Think and Discuss S&S: Share and Summarize E: Example	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES N: Notes LP: Links to the Past LC: Literature Connections CC: Computer Connections
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CHAPTER 4: MAKING SENSE OF PERCENTS

Rationals and Irrationals: *Percents—Develop*

Algorithms and Operations: *Fractions, Decimals—Review & Extend*

WEEK 13	<p>Administer <u>Pre-chapter Four Assessment</u>.</p> <p>4.1 Using Percents</p> <p>Converting among fractions, decimals, and percents.</p> <p>Using a percent to represent part of a whole.</p> <p>Using percents to compare groups of different sizes.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>83. T&D, p. 226; Investigation 1: T&D, p. 227; PS A, pp. 227–228.</p> <p>84. Investigation 1: T&D, p. 229; PS B, p. 229; [Recommended: PS C, p. 230; S&S, p. 230.]</p> <p>85. Investigation 2 (All).</p> <p>86. Investigation 3 (All).</p> <p>87. Investigation 4: PS I, p. 237.</p> <p>88. Investigation 4: PS J, p. 238; [Recommended: PS K, p. 239; S&S, p. 239.]</p> <p>89. QQ, p. 247 TE; IYOW, p. 246; Mixed Review, p. 247, #39–51</p> <p style="text-align: right;"><i>(continued)</i></p>	<p><i>For students who have difficulty with <u>Pre-chapter Four Assessment</u>:</i></p> <p>Items 1 to 6, converting fractions to decimals:</p> <p>Skills Intervention Workbook</p> <p>Skill 24: pp. 47–48.</p> <p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>2.7: Meaning of Percent, pp. 140–143.</p> <p>2.9: Fraction, Decimal, and Percent Relationships, pp.154–161.</p> <p><i>Standardized test review:</i></p> <p>Math Skills Maintenance Workbook</p> <p>Skill 24: Equivalent Fractions, pp. 68–69.</p>	<p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (i.e., construct tables to organize data showing book sales).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.11 Read, write, and identify percents of a whole (0 to 100%).</p> <p>6.N.14 Locate rational numbers on a number line (including positive and negative).</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents 0 to 100).</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math, Grade 5</p> <p>8.9: Finding a Percent of a Number.</p> <p>12.3: American Tour: Ratio Exploration.</p> <p>12.4: Ratios of Parts to Wholes.</p>
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 13 (continued)	<p>Note: Periods 85 and 86, assign S&S as homework if not enough time in class.</p>		<p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.26 Estimate a percent of quantity (0 to 100%).</p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p> <p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.1 Develop the concept of sampling when collecting data from a population and decide the best method to collect data for a particular question (POST MARCH IN GRADE 6).</p> <p>6.S.7 Read and interpret graphs.</p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 14	<p>4.2 Finding a Percent of a Quantity Calculating a percent of a whole.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>90. T&D, p. 248; Investigation 1 (All).</p> <p>91. Investigation 2: E, p. 252; PS C, pp. 252–253.</p> <p>92. Investigation 2: PS D, p. 253; PS E, p. 254; PS F, pp. 254–255; S&S, p.255.</p> <p>93. QQ, p. 259 TE; IYOW, p.258.</p> <p>Note: Period 93, assign S&S as part of homework if not enough time in class.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>2.8: Using and Finding Percents, pp. 144–153.</p>	<p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.7 Use mathematics to show and understand physical phenomena (e.g., determine the perimeter of a bulletin board).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.11 Read, write, and identify percents of a whole (0 to 100%).</p> <p>6.N.12 Solve percent problems involving percent, rate, and base.</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents 0 to 100).</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.26 Estimate a percent of quantity (0 to 100%).</p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p>	<p>LP: Everyday Math, Grade 5</p> <p>8.9: Finding a Percent of a Number.</p>

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WEEKS 14–15	<p>4.3 Percents and Wholes</p> <p>Using percent to represent part of a whole.</p> <p>Calculating a percent of a whole.</p> <p>Finding the whole from the part and the percent.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>94. Explore, p. 260 Investigation 1: E, p. 261; [Recommended: PS A, p. 262.]</p> <p>95. Investigation 1: PS B, p. 263; PS C, p. 264; S&S, p. 264.</p> <p>96. Investigation 2: T&D, p. 265; PS D, p. 265; PS E, p. 265.</p> <p>97. Investigation 2: E, p. 266; [Recommended: PS F, p. 266]; PS G, p. 267; S&S, p. 267.</p> <p>98. QQ, p. 272 TE; IYOW, p. 272.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>2.8: Using and Finding Percents, pp. 144–153.</p> <p>2.9 Fraction, Decimal, and Percent Relationships, pp. 154–163. 8.3: Capacity, pp. 362–363.</p> <p><i>Standardized Test Review:</i></p> <p>Skills Maintenance Workbook</p> <p>Skill 33: Capacity in the Customary System, p.85.</p> <p>Skill 36: Capacity in the Metric System, pp. 84–90.</p>	<p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p>6.N.7 Express equivalent ratios as a proportion.</p> <p>6.N.9 Solve proportions using equivalent fractions.</p> <p>6.N.10 Verify the proportionality using the product of the means equals the product of the extremes.</p> <p>6.N.11 Read, write, and identify percents of a whole (0% to 100%).</p> <p>6.N.12 Solve percent problems involving percent, rate, and base.</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p> <p>ALGEBRA STRAND</p> <p><i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>5.A.2 Translate simple verbal expressions into algebraic expressions (POST MARCH IN GRADE 5).</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math, Grade 5</p> <p>5.10: The Percent Circle: Reading Circle Graphs.</p> <p>5.11: The Percent Circle: Making Circle Graphs.</p> <p>9.10: Capacity:Liter, Milliliter, and Cubic Centimeter.</p> <p>11.6: Capacity and Weight.</p>

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WEEKS 14–15 (continued)			<p><i>Students will perform algebraic procedures accurately.</i></p> <p>Variables and expressions</p> <p>5.A.3 Substitute assigned values into variable expressions and evaluate using order of operations (POST MARCH IN GRADE 5).</p> <p>Equations and Inequalities</p> <p>5.A.4 Solve simple one-step equations using basic whole-number facts (POST MARCH IN GRADE 5).</p> <p>5.A.5 Solve and explain simple one-step equations using inverse operations involving whole numbers (POST MARCH IN GRADE 5).</p>	
	<p>Review and Self-Assessment <i>Suggested Per Period Pacing:</i></p> <p>99. Review and Self-Assessment, p. 273–275.</p> <p>100. Chapter 4 Test.</p>			

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CHAPTER 6: ANALYZING DATA

Algebraic Representations: *Coordinate Graphs—Develop; Tables and Graphs—Develop*

Coordinate Geometry: *Coordinate Representations—Develop*

Data Analysis: *Graphs and Displays—Develop; Modeling and Analysis—Develop; Statistical Measures—Develop*

WEEK 16	<p>6.1 Using Graphs to Understand Data</p> <p>Interpreting and creating bar graphs and histograms.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>101. Explore, p. 342; Investigation 1: T&D, p. 344; PS A, p. 344; S&S, p. 345.</p> <p>102. Investigation 2: PS B, pp. 346–347; PS C, p. 348; T&D, p. 348; {Suggested: PS D, p. 349; S&S, p. 349}.</p> <p>103. Investigation 3: PS E, p. 350; PS F, p. 351; PS G, p. 352; S&S, p. 352; QQ, p. 361 TE; IYOW, p. 359.</p> <p>Note: In problem set G, the word “range” should be replaced with the word “interval”</p> <p>Note: Period 101, assign S&S as part of homework if there is not enough time in class; Period 103, assign IYOW, p. 359, as part of homework</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 68: Make a Table, pp. 135–136.</p> <p>Skill 69: Statistical Graphs, pp. 137–138.</p> <p><i>Standardized Test Review:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 74: Misleading Graphs, pp. 147–148.</p>	<p>REPRESENTATION STRAND</p> <p><i>Students will select, apply, and translate among mathematical representations to solve problems.</i></p> <p>6.R.6 Investigate relationships between different representations and their impact on a given problem.</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (e.g., construct tables to organize data showing book sales).</p> <p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.2 Record data in a frequency table (POST MARCH IN GRADE 6).</p> <p>6.S.4 Determine and justify the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, histogram, or circle graph) (POST MARCH IN GRADE 6).</p> <p>6.S.7 Read and interpret graphs.</p> <p><i>Students will make predictions that are based upon data analysis.</i></p> <p>6.S.8 Justify predictions made from data.</p>	<p>LP: Everyday Math Grade 5</p> <p>6.1: Organizing Data.</p> <p>6.2: Natural Measures of Length.</p> <p>6.3: Stem and Leaf Plots for Hand and Finger Measures.</p> <p>6.4: Mystery Plots.</p> <p>6.5: Sample Size and Good Conclusions.</p> <p>6.6: Analysis of Sample Data.</p> <p>CC: Statistical database for U.S.: www.statemaster.com.</p> <p>Statistical database for countries around the world: www.nationmaster.com.</p>
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 16–17	<p>6.2 What is Typical?</p> <p>Interpreting and creating line plots and stem plots.</p> <p>Finding and interpreting the mode, median, and mean.</p> <p>Choosing the best average for a given situation.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>104. T&D, p. 362 Investigation 1: PS A, p. 363; PS B, p. 364.</p> <p>105. Investigation 1: PS C, pp. 364–365, # 1, 2, [Recommended, #3, 4]; S&S, p. 365.</p> <p>106. {Suggested, Investigation 2 (All)}; Investigation 3 (All).</p> <p>107. Investigation 4: PS I, p.373; PS J, pp. 374–375; [Recommended, PS K, p. 375; PS L, p. 376]; S&S, p. 376.</p> <p>108. {Suggested, Investigation 5 (All)}; QQ, p. A660 TE; IYOW, p. 386.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>4.2: Displaying Data, pp. 190–201.</p> <p>4.3: Analyzing Data, pp. 202–203.</p> <p>Skills Intervention Workbook</p> <p>Skill 66: Line Plots, pp. 131–132.</p> <p>Skill 67: Stem and Leaf Plots, pp. 133, 134.</p> <p><i>Standardized Test Review:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 65: Mean, Median, Mode, pp. 129–130.</p>	<p>REPRESENTATION STRAND</p> <p><i>Students will select, apply, and translate among mathematical representations to solve problems.</i></p> <p>6.R.6 Investigate relationships between different representations and their impact on a given problem.</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (e.g., construct tables to organize data showing book sales).</p> <p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.2 Record data in a frequency table (POST MARCH IN GRADE 6).</p> <p>6.S.4 Determine and justify the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, histogram, or circle graph) (POST MARCH IN GRADE 6).</p> <p>6.S.5 Determine the mean, mode and median for a given set of data.</p> <p>6.S.6 Determine the range for a given set of data.</p> <p>6.S.7 Read and interpret graphs.</p> <p><i>Students will make predictions that are based upon data analysis.</i></p> <p>6.S.8 Justify predictions made from data.</p>	<p>LP: Everyday Math, Grade 5</p> <p>6.4: Mystery Plots.</p>
	<p>Review and Self-Assessment</p> <p><i>Suggested Per Period Pacing:</i></p> <p>109. Begin Review & Self-Assessment, p. 402.</p> <p>110. Review & Self-Assessment, pp. 402-407.</p> <p>111. Chapter 6 Test.</p>			

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CHAPTER 8: GEOMETRY AND MEASUREMENT

Algebraic Representations: *Patterns and Numeric Forms—Develop, Properties and Rules—Develop*

Two-Dimensional Shapes: *Polygons, Quadrilaterals, Triangles, Angles—Develop*

Measurement: *Perimeter and Area—Develop*

WEEK 18	<p>Administer <u>Pre-Chapter Eight Assessment</u></p> <p>8.1 Angles</p> <p>Measuring angles and drawing angles with given measures.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>112. T&D, p. 466; Investigation 1: T&D, p. 468; PS A, p. 470.</p> <p>113. Investigation 1: E, p. 470; {Suggested: PS B, p. 471, # 1, 3–8;} S&S, p. 471.</p> <p>114. Investigation 2: PS C, p. 472; T&D, p. 473; PS D, p. 473.</p> <p>Note: extend the work of PS C to include the introduction of <i>supplementary angles</i> as a pair of angles whose sum is 180 degrees, and <i>complementary angles</i> as a pair of angles whose sum is 90 degrees.</p> <p>115. Investigation 2: T&D, p. 474 [Recommended, PS E, p. 475–476]; S&S, p. 476.</p> <p>116. QQ, p. 481 TE; IYOW, p. 480.</p>	<p><i>For students who have difficulty with <u>Pre-Chapter Eight Assessment</u>:</i></p> <p>Items 1 to 6, converting between centimeters and meters:</p> <p>Hot Words, Hot Topics</p> <p>8.2: Length and Distance, pp. 356–359.</p> <p>Items 7 to 9, measuring with a metric ruler and a standard ruler, with accuracy to the nearest tenth of a centimeter and nearest eighth of an inch:</p> <p>Impact Mathematics Refresher Worksheet:</p> <p>#6, p.9.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts</i></p> <p>6.PS.6 Translate from a picture/diagram to a numeric expression.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.11 Translate from a picture/diagram to a number or symbolic expression.</p> <p>6.PS.13 Model problems with pictures/diagrams physical objects.</p> <p>GEOMETRY STRAND</p> <p><i>Students will identify and justify geometric relationships, formally and informally.</i></p> <p>7.G.7 Find a missing angle when given angles of a quadrilateral.</p> <p>Note: These concepts are introduced in Grade 6 to prepare students for later mastery.</p> <p>8.G.1 Identify pairs of vertical angles as congruent.</p> <p>8.G.6 Calculate the missing angle measurements when given two intersecting lines and an angle.</p> <p>Note: These concepts are introduced in Grade 6 to prepare students for later mastery.</p>	<p>LP: Everyday Math, Grade 5</p> <p>3.3: Exploring Angle Measures.</p> <p>3.4: Using a Protractor.</p> <p>3.7: Properties of Polygons.</p> <p>3.9: Angles of Polygons.</p>
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 18 (continued)		<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>7.1: Naming and Classifying Angles and Triangles, pp. 296–303.</p> <p>7.3: Symmetry and Transformations pp. 314–319.</p> <p>Skills Intervention for Middle School</p> <p>Skill 42: Classifying Angles, pp.83–84.</p>		

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WEEKS 19	<p>8.2 Measuring Around Finding and estimating perimeters. Understanding pi and the formula for the circumference of a circle.</p> <p><i>Suggested Per Period Pacing:</i> 117. T&D, p. 482; Investigation 1: PS A, pp. 482–484. 118. Investigation 1: PS B, p. 484; E, p.485; PS C, p. 485; S&S, p.486.</p> <p>Note: Period 121, assign S&S as part of homework if not enough time.</p> <p>119. Investigation 2:T&D, p. 386; PS D, p. 487; *PS E, p. 489, 1–3. 120. QQ, p. 493 TE; IYOW, p.493.</p> <p>Note: When determining the value of formulas that involve π, use the π key on the calculator, or write the answer in terms of π. *Scientific calculator is suggested.</p>	<p><i>For additional practice or homework:</i> Hot Words, Hot Topics 7.4 Perimeter, pp. 320–323.</p> <p><i>Standardized test review:</i> Hot Words, Hot Topics 8.1 Systems of Measurement, pp. 352–355. 8.6 Size and Scale, pp. 368–371.</p> <p>Skills Intervention for Middle School Skill 46: Circumference of Circles, pp. 91–92. Skill 48: Area of Circles, pp. 95–96.</p>	<p>PROBLEM SOLVING STRAND <i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.6 Translate from a picture/diagram to a numeric expression.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.11 Translate from a picture/diagram to a number or symbolic expression.</p> <p>6.PS.13 Model problems with pictures/diagrams physical objects.</p> <p>6.PS.15 Make organized lists or charts to solve numerical problems.</p> <p>ALGEBRA STRAND <i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two and three). POST MARCH IN GRADE 6 FOR 2 VARIABLES IN EXPRESSION.</p> <p>6.A.6 Evaluate simple proportions within context.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>Note: Additional work needs to be included to practice determining the perimeter of a figure when the figure is located on the coordinate graph.</p>

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WEEKS 19 (continued)			GEOMETRY STRAND <i>Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes</i> 6.G.5 Identify radius, diameter, chords and central angles of a circle. 6.G.6 Understand the relationship between the diameter and radius of a circle. 6.G.7 Determine the area and circumference of a circle, using the appropriate formula. 6.G.8 Calculate the area of a sector of a circle, given the measure of a central angle and the radius of the circle. 6.G.9 Understand the relationship between the circumference and the diameter of a circle.	

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WEEKS 20	<p>8.3 Areas and Squares Finding and estimating areas. Understanding and applying the ideas of squaring and taking the square root.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>121.Explore, p. 494.</p> <p>122.Investigation 1: PS A, p. 495; PS B, p. 496; T&D, p. 497; [Recommended—PS C, p. 497]; S&S, p. 498.</p> <p>123.Investigation 2 :* T&D, p. 498; PS D, p. 499; PS E, p. 500; [Recommended: PS F, p. 500; S&S, p.501.]</p> <p>124.Investigation 3: T&D, p. 501; PS G, p. 502; *PS H, pp. 502–503; S&S, p. 503.</p> <p>125.Investigation 4:T&D, p. 504; PS I, p. 505; E, p. 506; {Suggested: *PS J, p. 506; *PS K, p. 507; S&S, p. 507.}</p> <p>126.QQ, p. A668 TE; IYOW, p. 512.</p> <p>Note: Period 123, assign S&S as part of homework if not enough time.</p> <p>*Scientific calculator is suggested.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics 3.2 Square Roots, pp.174–179.</p> <p><i>Standardized test review:</i></p> <p>Skills Intervention for Middle School Skill 49: Area of Rectangles, Squares and Parallelograms, pp. 97–98. Skill 50: Area of Triangles, pp. 99–100. Skill 51: Area of Trapezoids, pp. 101–102.</p> <p>Math Skills Maintenance, Course 1 Skill 16: Using Order of Operations, pp. 52–53. Skill 17: Using order of operations with Parentheses, pp. 54–55. Skill 18: Using Order of Operations with Powers, pp. 56–57</p>	<p>NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.3 Define and identify the distributive property of multiplication over addition.</p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.17 Multiply and divide fractions with unlike denominators.</p> <p>6.N.18 Multiply and divide mixed numbers with unlike denominators.</p> <p>6.N.21 Find multiple representations of rational numbers (fractions, decimals, and percents 0 to 100).</p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two or three).</p> <p>6.N.23 Represent repeated multiplication in exponential form.</p> <p>6.N.24 Represent exponential form as repeated multiplication.</p> <p>6.N.25 Evaluate expressions having exponents where the power is an exponent of one, two or three.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math Grade 5</p> <p>1.7: Square Numbers.</p> <p>1.8: Unsquaring Numbers.</p> <p>9.4: Areas of Rectangles.</p> <p>9.5: Rectangle Method for Finding Area.</p> <p>9.6: Formulas for the Area of Triangles and Parallelograms.</p> <p>9.7: Earth’s Water Surface.</p> <p>10.8 Circumference of a Circle.</p> <p>10.9: Area of Circles.</p>

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 20–21 (continued)	<p>Note: Interchange the use of the terms <i>base</i>, <i>altitude</i>, and <i>length</i>, <i>width</i> where appropriate (when working with rectangles).</p> <p>Note: Additional work needs to be included to practice determining the perimeter of a figure when the figure is located on the coordinate graph.</p>		<p>7.N.16 Determine the square root of non-perfect squares using a calculator.</p> <p>Note: These concepts are introduced in Grade 6 to prepare students for later mastery.</p> <p><i>Students will compute accurately and make reasonable estimates.</i></p> <p>6.N.27 Justify the reasonableness of answers using estimation (including rounding).</p> <p>ALGEBRA STRAND</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two and three). POST MARCH IN GRADE 6 for 2 variables in the expression.</p> <p>6.A.6 Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)</p> <p>GEOMETRY STRAND</p> <p><i>Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes.</i></p> <p>6.G.2 Determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, and trapezoids) and develop formulas.</p> <p>6.G.3 Use a variety of strategies to find the area of regular and irregular polygons.</p>	<p>LC: <i>Grandfather Tang's Story</i> by Ann Tompert</p>

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 21–22	<p>8.4 Calculating Areas Finding and estimating areas.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>127. Explore, p. 514; Investigation 1, PS A, p. 515.</p> <p>128. Investigation 1: PS B, p. 516; [Recommended: Ps C, P, 517, S&S, p. 517.]</p> <p>129. Investigation 2: PS D, p. 518; [Recommended: PS E, pp. 518–519; PS F, p. 520]; PS G, p. 521; S&S, p. 521 (use of Geometer’s Sketchpad is suggested).</p> <p>130. Investigation 3 :PS H, pp. 522–523; *PS I, p. 524; S&S, p. 524; {Suggested, Lab Investigation, pp. 525–527}.</p> <p>131. QQ, p. A669 TE; IYOW, p. 535.</p> <p>Note: Interchange the use of the terms altitude and height when working with area of triangles .</p> <p>Note: When determining the value of formulas that involve π, use the π key on the calculator, or write the answer in terms of π.</p> <p>*Scientific Calculator is suggested.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>7.5: Area, pp. 324–329.</p> <p>7.8: Circles, pp. 340–345.</p> <p><i>Standardized Test Review:</i></p> <p>Hot Words, Hot Topics</p> <p>8.3: Area, Volume, and Capacity, pp. 360–363.</p> <p>Math Skills Maintenance, Course 1</p> <p>Skill 33: Measurement: Capacity (cups, pints, quarts, gallons) in the Customary System, p.85.</p> <p>Skill 36: Measurement: Capacity (liter, milliliter) in the Metric System, p. 88.</p>	<p>NUMBER SENSE AND OPERATIONS STRAND <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.17 Multiply and divide fractions with unlike denominators.</p> <p>6.N.18 Multiply and divide mixed numbers with unlike denominators.</p> <p>ALGEBRA STRAND <i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two and three). POST MARCH IN GRADE 6 for 2 variables in the expression.</p> <p>6.A.6 Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)</p> <p>GEOMETRY STRAND <i>Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes.</i></p> <p>6.G.2 Determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, and trapezoids) and develop formulas.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Mathematics Grade 5</p> <p>9.4: Area of Rectangles.</p> <p>9.5: The Rectangle Method for Finding Area.</p> <p>9.6: Formulas for the Area of Triangles and Parallelograms.</p> <p>9.7: Earth’s Water Surface.</p>

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WEEKS 21–22 (continued)			<p>6.G.3 Use a variety of strategies to find the area of regular and irregular polygons.</p> <p>6.G.4 Determine the volume of rectangular prisms by counting cubes and develop the formula.</p> <p>6.G.7 Determine the area and circumference of a circle, using the appropriate formula.</p> <p>6.G.9 Understand the relationship between the circumference and the diameter of a circle.</p> <p>MEASUREMENT STRAND <i>Students will develop strategies for estimating measurements.</i></p> <p>6.M.7 Estimate volume, area, and circumference (square, rectangle, rhombi, trapezoid, rectangular prism, circle).</p> <p>6.M.8 Justify the reasonableness of estimates.</p>	
	<p>Review and Self-Assessment <i>Suggested Per Period Pacing:</i></p> <p>132. Begin Review & Self-Assessment, p. 551. 133. Review & Self-Assessment, pp. 551–555. 134. Chapter 8 Test.</p>			

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CHAPTER 7: VARIABLES AND RULES

Numbers and Number Sense: *Exponents and Roots—Develop*

Algebraic Representations: *Properties and Rules—Develop*

WEEK 23	7.1 Patterns and Variables Writing and interpreting rules for sequences and input/output tables. Showing that two rules for a sequence are equivalent. <i>Suggested Per Period Pacing:</i> 135.Explore, p. 410; Investigation 1: PS A, pp.411–412. 136.Investigation 1: PS B, p. 413; S&S, p. 414. 137.2: T&D, p.414; E, p. 415; PS C, pp.416–418; S&S, p. 418. 138.Investigation 3 (All). 139.QQ, p. A664 TE; IYOW, p. 428	<i>For additional practice or homework:</i> Hot Words, Hot Topics Patterns, pp. 61–63 Skills Intervention for Middle School Mathematics Skill 88: Look for a Pattern, pp. 175–176. <i>Standardized Test Review:</i> Math Skills Maintenance Workbook Using Order of Operations, pp. 52–57 Skills Intervention for Middle School Mathematics Skill 8: Order of Operations, pp. 15–16	PROBLEM SOLVING STRAND <i>Students will solve problems that arise in mathematics and in other contexts.</i> 6.PS.6 Translate from a picture/diagram to a numeric expression. <i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i> 6.PS.11 Translate from a picture/diagram to a number or symbolic expression. 6.PS.12 Use trial and error and the process of elimination to solve problems. NUMBER SENSE AND OPERATION STRAND <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i> 6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three). (continued)	LP: Everyday Math Grade 5 10.3: Algebraic Expressions. 10.4: Rules, Tables and Graphs: Part 1. 10.6: Rules, Tables and Graphs: Part 2.
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 23 (continued)			ALGEBRA STRAND <i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i> 6.A.1 Translate two-step verbal expressions into algebraic expressions. <i>Students will perform algebraic procedures accurately.</i> 6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three) (POST MARCH IN GRADE 6 for expressions with 2 variables). 6.A.6 Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.).	

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WEEKS 23–24	<p>7.2 Rules in Real Life</p> <p>Showing that two rules for a sequence are equivalent.</p> <p>Writing and interpreting rules for real-life situations.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>140. Explore, p. 430; Investigation 1: PS A, pp. 431–432; S&S, p. 432.</p> <p>Note: Period 140 assign S&S for homework if not enough time.</p> <p>141. Investigation 2 (All).</p> <p>142. Investigation 3 (All).</p> <p>143. QQ, p. 449 TE; IYOW, p. 448.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>6.1: Writing Expressions and Equations, pp. 254–261.</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.4 Act out or model with manipulatives activities involving mathematical content from literature.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.11 Translate from a picture/diagram to a number or symbolic expression.</p> <p>6.PS.13 Model problems with pictures/diagrams or physical objects.</p> <p>6.PS.14 Analyze problems by observing patterns.</p> <p>6.PS.15 Make organized lists or charts to solve numerical problems.</p> <p>CONNECTIONS STRAND</p> <p><i>Students will understand how mathematical ideas interconnect and build on one another to produce a coherent whole.</i></p> <p>6.CN.5 Model situations with objects and representations and be able to draw conclusions.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math Grade 5</p> <p>10.5: American Tour: Old Faithful’s Next Eruption.</p>

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WEEKS 23–24 (continued)			<p>REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (i.e., construct tables to organize data showing book sales).</p> <p>NUMBER SENSE AND OPERATION STRAND <i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three).</p> <p>ALGEBRA STRAND <i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions.</p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three). POST MARCH IN GRADE 6 for expressions with 2 variables.</p> <p>6.A.3 Translate two-step verbal equations into algebraic equations. POST MARCH IN GRADE 6.</p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 25	<p>7.3 Explaining Number Relationships</p> <p>Using variables to explain number relationships.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>144. T&D, p. 450; Investigation 1: PS A, p. 451; E, p. 452.</p> <p>145. Investigation 1: T&D, p. 453; PS B, p.454; S&S, p. 454.</p> <p>146. Investigation 2 (All)</p> <p>147. QQ, p. 459 TE; IYOW, p. 458</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>6.2: Simplifying Expressions, pp. 262–269.</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.14 Analyze problems by observing patterns</p> <p>6.PS.15 Make organized lists or charts to solve numerical problems</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$)</p> <p>NUMBER SENSE AND OPERATION STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.2 Define and identify the commutative and associative properties of addition and multiplication</p> <p>6.N.3 Define and identify the distributive property of multiplication over addition</p> <p style="text-align: right;"><i>(continued)</i></p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 25 (continued)			<p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication</p> <p>6.N.5 Define and identify the zero property of multiplication</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three)</p> <p>ALGEBRA STRAND</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions</p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three). POST MARCH IN GRADE 6 for expressions with 2 variables.</p> <p>6.A.3 Translate two-step verbal equations into algebraic equations. POST MARCH IN GRADE 6.</p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
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CHAPTER 9: UNDERSTANDING QUESTIONS

Algebraic Representations: *Coordinate Graphs—Develop, Tables and Graphs—Develop*

Algebraic Reasoning: *Patterns and Numeric Forms—Develop*

Functions and Relations: *Linear Expressions/Equations—Expose*

WEEK 26	<p>9.1 Understanding Equations</p> <p>Understanding equations and inequalities.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>148. Explore, p. 558; Investigation 1: T&D, p. 559; PS A, p. 559; S&S, p. 560.</p> <p>149. Investigation 2: T&D, p. 560; PS B, p. 561; T&D, p. 561; PS C, p. 562; S&S, p. 562.</p> <p>150. {Suggested, Lab Investigation pp. 563–564.}</p> <p>Note: This Lab Investigation reinforces the notion of undoing in a practical context that may be useful.</p> <p>151. QQ, p. 569 TE; IYOW, p. 566.</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>6.3: Evaluating Expressions and Formulas, pp. 270–273.</p> <p>6.5: Inequalities, pp. 278–281.</p> <p>Math Skill Maintenance Workbook</p> <p>Skill 30: Identifying Properties, pp. 80–81.</p> <p>Skill 31: Using Properties, pp. 82–83.</p> <p>Skills Intervention for Middle School Mathematics</p> <p>Skill 8: Order of Operations, pp. 15–16.</p> <p><i>Standardized Test Review:</i></p> <p>Hot Words, Hot Topics</p> <p>6.2 Simplifying Expressions, pp. 262–267.</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.8 Select an appropriate representation of a problem.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.12 Use trial and error and the process of elimination to solve problems.</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$).</p> <p>NUMBER SYSTEMS</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.2 Define and identify the commutative and associative properties of addition and multiplication.</p> <p style="text-align: right;"><i>(continued)</i></p>	
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 26 (continued)			<p>6.N.3 Define and identify the distributive property of multiplication over addition.</p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p>6.N.5 Define and identify the zero property of multiplication.</p> <p>ALGEBRA STRAND</p> <p><i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions.</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>5.A.3 Substitute assigned values into variable expressions and evaluate using order of operations (POST MARCH IN GRADE 5).</p> <p>5.A.4 Solve simple one-step equations using basic whole-number facts (POST MARCH IN GRADE 5).</p> <p>5.A.5 Solve and explain simple one-step equation using inverse operations involving whole numbers (POST MARCH IN GRADE 5).</p> <p>6.A.3 Translate two-step verbal sentences into algebraic equations (POST MARCH IN GRADE 6).</p> <p>6.A.4 Solve and explain two-step equations (POST MARCH IN GRADE 6).</p>	

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WEEK 27	<p>9.2 Backtracking</p> <p>Solving equations by backtracking.</p> <p>Solving equations using guess-check-and-improve.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>152. T&D, p. 570; Investigation 1: PS A, pp. 571–572; E, p. 572; PS B, p. 573, #1, 2.</p> <p>153. PS B, p. 573, # 3–5; S&S, p. 573; Investigation 2: PS C, p. 574.</p> <p>154. T&D, p. 575; PS D, pp. 575–576; S&S, p. 576; Investigation 3: T&D, p. 576; Ps E, p. 577.</p> <p>155. PS F, pp. 577–578; S&S, p. 578 QQ, p. TE585, TE 671; IYOW, p. 583.</p>	<p><i>For additional practice or homework:</i></p> <p>Skill Intervention for Middle School Mathematics</p> <p>Skill 37: Solve Equations Involving Addition, pp. 73–74.</p> <p>Skill 38: Solve Equations Involving Subtraction, pp. 75–76.</p> <p>Skill 39: Solve Equations Involving Multiplication, pp. 77–78.</p> <p>Skill 40: Solve Equations Involving Division, pp. 79–80.</p>	<p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p>ALGEBRA STRAND</p> <p><i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions.</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>5.A.3 Substitute assigned values into variable expressions and evaluate using order of operations (POST MARCH IN GRADE 5).</p> <p style="text-align: right;"><i>(continued)</i></p>	

grade 6

MATHEMATICS PLANNING GUIDE

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 27 (continued)			<p>5.A.5 Solve and explain simple one-step equation using inverse operations involving whole numbers (POST MARCH IN GRADE 5).</p> <p>6.A.3 Translate two-step verbal equations into algebraic equations (POST MARCH IN GRADE 6).</p> <p>6.A.4 Solve and explain two-step equations involving whole numbers using inverse operations (POST MARCH IN GRADE 6).</p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 27–28	<p>9.3 Guess-Check-and-Improve Choosing a solution method for an equation.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>156.T&D, p. 586; Investigation 1: E, p.587; PS A, p. 588; S&S, p. 589.</p> <p>157.Investigation 2: PS B, p. 589; E, p. 590; PS C, p. 591; S&S, p. 591.</p> <p>158.Investigation 3:, T&D, p. 593; PS d, P. 593; S&S, p. 593; IYOW, p. 597.</p> <p>159.QQ, p. 598 TE.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention</p> <p>Skill 84: Guess and Check: pp. 167–168</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.8 Select an appropriate representation of a problem.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.12 Use trial and error and the process of elimination to solve problems.</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three)</p> <p style="text-align: right;"><i>(continued)</i></p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 27–28 (continued)			<p>6.N.23 Represent repeated multiplication in exponential form.</p> <p>6.N.24 Represent exponential form as repeated multiplication.</p> <p>ALGEBRA STRAND <i>Students will represent and analyze algebraically a wide variety of problem solving situations.</i></p> <p>5.A.2 Translate simple verbal expressions into algebraic expressions (POST MARCH IN GRADE 5).</p> <p>6.A.1 Translate two-step verbal expressions into algebraic expressions.</p> <p><i>Students will perform algebraic procedures accurately.</i></p> <p>5.A.3 Substitute assigned values into variable expressions and evaluate using order of operations (POST MARCH IN GRADE 5).</p> <p>6.A.3 Translate two-step verbal equations into algebraic equations (POST MARCH IN GRADE 6).</p> <p>6.A.4 Solve and explain two-step equations involving whole numbers using inverse operations (POST MARCH IN GRADE 6).</p>	
<p>Review and Self-Assessment <i>Suggested Per Period Pacing:</i></p> <p>160. Review & Self-Assessment, pp. 599–601.</p> <p>161. Chapter 9 Test.</p>				

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 29	<p>8.5 Understanding and Applying the Pythagorean Theorem.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>162. Explore, p. 536; Investigation 1: PS A, pp. 537–538; PS B, p. 539; S&S, p. 540.</p> <p>163. Investigation 2: PS C, p. 540; E, p. 541; PS D, pp. 542–543; S&S, p. 543.</p> <p>164. QQ, p. 550 TE; IYOW, p. 548; Review and Self-Assessment, pp. 554–555, #14, 33, 34.</p>	<p><i>For test preparation, additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>7.4: Perimeter of a Right Triangle, p.322.</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts</i></p> <p>6.PS.6 Translate from a picture/diagram to a numeric expression.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems</i></p> <p>6.PS.11 Translate from a picture/diagram to a number or symbolic expression.</p> <p>6.PS.13 Model problems with pictures/diagrams or physical objects.</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena</i></p> <p>6.R.7 Use mathematics to show and understand physical phenomena (i.e., determine the perimeter of a bulletin board).</p> <p>6.R.9 Use mathematics to show and understand mathematical phenomena (i.e., Find the missing value: $(3 + 4) + 5 = 3 + (4 + \underline{\quad})$).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems</i></p> <p>6.N.4 Define and identify the identity and inverse properties of addition and multiplication.</p> <p style="text-align: right;"><i>(continued)</i></p>	

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WEEK 29 (continued)			<p><i>Students will understand meanings of operations and procedures, and how they relate to one another</i></p> <p>6.N.22 Evaluate numerical expressions using order of operations (may include exponents of two and three).</p> <p>6.N.23 Represent repeated multiplication in exponential form.</p> <p>6.N.24 Represent exponential form as repeated multiplication.</p> <p>6.N.25 Evaluate expressions having exponents where the power is an exponent of one, two, or three.</p> <p>ALGEBRA STRAND</p> <p><i>Students will perform algebraic procedures accurately</i></p> <p>6.A.2 Use substitution to evaluate algebraic expressions (may include exponents of one, two and three) (POST MARCH IN GRADE 6).</p> <p>6.A.4 Solve and explain two-step equations involving whole numbers using inverse operations (POST MARCH IN GRADE 6).</p> <p>6.A.6 Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.).</p> <p style="text-align: right;"><i>(continued)</i></p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 29 (continued)			<p>GEOMETRY STRAND</p> <p><i>Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes</i></p> <p>6.G.2 Determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, & trapezoids) and develop formulas.</p> <p><i>Students will identify and justify geometric relationships, formally and informally</i></p> <p>7.G.5 Identify the right angle, hypotenuse, and legs of a right triangle (POST MARCH IN GRADE 7).</p> <p>7.G.6 Explore the relationship between the lengths of the three sides of a right triangle to develop the Pythagorean Theorem (POST MARCH IN GRADE 7).</p> <p>7.G.8 Use the Pythagorean Theorem to determine the unknown length of a side of a right triangle (POST MARCH IN GRADE 7).</p> <p>7.G.9 Determine whether a given triangle is a right triangle by applying the Pythagorean Theorem and using a calculator (POST MARCH IN GRADE 7).</p> <p>Note: The New York State Scope places these concepts in grade 7. These concepts are introduced in Grade 6 to prepare students for later mastery.</p>	

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WEEK 30	<p>6.3 Collecting and Analyzing Data</p> <p>Interpreting and creating bar graphs and histograms.</p> <p>Interpreting and creating line plots and stem plots.</p> <p>Finding and interpreting the mode, median, and mean.</p> <p>Choosing the best average for a given situation.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>165.T&D, p. 391 Investigation 1: PS A, p. 391, E, p.392; PS B, p. 393; S&S, p. 393.</p> <p>166.Investigation 2 (All).</p> <p>167.QQ, p. 401 TE; IYOW, p. 401</p>	<p><i>For additional practice or homework:</i></p> <p>Hot Words, Hot Topics</p> <p>4.1: Collecting Data, pp. 184–189.</p> <p>4.4: Statistics, pp. 204–209.</p> <p><i>Standardized Test Review:</i></p> <p>Hot Words, Hot Topics</p> <p>6.6: Graphing on the Coordinate Plane, pp. 282-284.</p>	<p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.1 Develop the concept of sampling when collecting data from a population and decide the best method to collect data for a particular question (POST MARCH IN GRADE 6).</p> <p>6.S.2 Record data in a frequency table (POST MARCH IN GRADE 6).</p> <p>6.S.4 Determine and justify the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, histogram, or circle graph) (POST MARCH IN GRADE 6).</p> <p>6.S.5 Determine the mean, mode and median for a given set of data.</p> <p>6.S.6 Determine the range for a given set of data.</p> <p>6.S.7 Read and interpret graphs.</p> <p><i>Students will make predictions that are based upon data analysis.</i></p> <p>6.S.8 Justify predictions made from data.</p>	<p>LP: Everyday Math, Grade 5</p> <p>6.1: Organizing Data.</p> <p>6.6: Analysis of Sample Data.</p>

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CHAPTER 10: UNDERSTANDING PROBABILITY

Data Analysis: *Graphs and Displays—Develop; Modeling and Analysis—Develop; Surveys and Sampling—Develop*

Probability: *Basic Concepts and Rules—Develop; Experiments and Simulations—Develop*

WEEK 30 (continued)	<p>10.1 The Language of Chance</p> <p>Understanding probability. Identifying outcomes. Finding probabilities of events.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>168. T&D, p. 604; Investigation 1: PS A, pp. 605–606; PS B, p. 606; PS C, p. 607; S&S, p. 607.</p> <p>Note: Period 168, assign S&S as part of homework.</p> <p>169. Investigation 2:E, p. 608; PS D; T&D, p. 609; PS E, p. 610; PS f, p. 611; S&S, p. 612.</p> <p>170. QQ, p. 619 TE; IYOW, p. 617</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 75: Tree Diagrams, pp. 149–150. Skill 76: Counting Outcomes, pp. 151–152.</p> <p>Hot Words, Hot Topics</p> <p>4.6: Probability, pp. 218–221</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.4 Act out or model with manipulatives activities involving mathematical content from literature.</p> <p><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></p> <p>6.PS.12 Use trial and error and the process of elimination to solve problems.</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (i.e., construct tables to organize data showing book sales).</p> <p>NUMBER SENSE AND OPERATIONS STRAND</p> <p><i>Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems.</i></p> <p>6.N.7 Understand the concept of ratio.</p> <p style="text-align: right;"><i>(continued)</i></p>	<p>LP: Everyday Math Grade 5</p> <p>12.1: Factor Trees. 12.2: Choices, Tree Diagrams and Probability.</p>
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 30 (continued)			<p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.1 Develop the concept of sampling when collecting data from a population and decide the best method to collect data for a particular question (POST MARCH IN GRADE 6).</p> <p><i>Students will apply and understand concepts of probability.</i></p> <p>5.S.5 List the possible outcomes for a single-event experiment (POST MARCH IN GRADE 5).</p> <p>5.S.6 Record experiment results using fractions/ratios (POST MARCH IN GRADE 5).</p> <p>5.S.7 Create a sample space and determine the probability of a single event, given a simple experiment (i.e., rolling a number cube) (POST MARCH IN GRADE 5).</p> <p><i>Students will make predictions that are based upon data analysis.</i></p> <p>Predictions from Data</p> <p>6.S.8 Justify predictions made from data.</p>	

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WEEKS 30–31	<p>10.2 Analyzing Games Using probabilities to analyze games.</p> <p><i>Suggested Per Period Pacing:</i> 171. Explore, p. 620; Investigation 1: PS A, p. 621; PS B, p. 622.</p> <p>Note: Period 168, assign S&S as part of homework.</p> <p>172. Investigation 2: PS C, p. 623; PS D, p. 623, T&D, p. 624; PS E, p. 624, S&S, p. 624.</p> <p>173. Investigation 3: PS F, p. 625; PS G, p. 625; S&S, p. 625.</p> <p>174. Investigation 4: PS H, pp. 626–627; T&D, p. 627; Ps I, p. 628; PS J, p. 629; S&S, p. 630.</p> <p>175. QQ, p. 637 TE; IYOW, p. 635.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook Skill 77: pp. 153–154. Skill 78: pp. 155–156. Skill 79: pp. 157–168.</p> <p>Hot Words, Hot Topics 4.6: Probability, pp. 221–225.</p>	<p>PROBLEM SOLVING STRAND <i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.9 Understand the basic language of logic in mathematical situations (and, or, and not).</p> <p>REPRESENTATION STRAND <i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (i.e., construct tables to organize data showing book sales).</p> <p>STATISTICS AND PROBABILITY STRAND <i>Students will apply and understand concepts of probability.</i></p> <p>5.S.5 List the possible outcomes for a single-event experiment (POST MARCH IN GRADE 5).</p> <p>5.S.7 Create a sample space and determine the probability of a single event, given a simple experiment (i.e., rolling a number cube) (POST MARCH IN GRADE 5).</p>	<p>LP: Everyday Math Grade 5 12.1: Factor Trees. 12.2: Choices, Tree Diagrams, and Probability.</p>
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 31	<p>10.3 Making Matches</p> <p>Working with situations in which the probabilities depend on previous results.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>176. T&D, p. 638; Investigation 1: PS A, p.639; PS B, p.641; PS C, p. 642; S&S, p. 642.</p> <p>177. Investigation 2: PS D, p. 643; PS E, P. 644; PS F, pp. 644–645</p> <p>Note: Period 174, assign S&S as part of homework.</p> <p>178. QQ, p. A674 TE; IYOW, p. 650.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention Workbook</p> <p>Skill 75: Tree Diagrams, pp. 149–150.</p> <p>Skill 76: Counting Outcomes, pp. 151–152.</p> <p>Hot Words, Hot Topics</p> <p>4-5: Combinations and Permutations, pp. 210–217</p> <p>4-6: Probability 218–228</p> <p><i>Standardized Test Preparation:</i></p> <p>Hot Words, Hot Topics</p> <p>4.3: Analyzing Data, pp. 402–404.</p> <p>4.4: Statistics, pp. 404–409.</p> <p>Skills Intervention for Middle School Mathematics</p> <p>Skill 65: Mean, Median, Mode, pp. 129–130.</p>	<p>PROBLEM SOLVING STRAND</p> <p><i>Students will solve problems that arise in mathematics and in other contexts.</i></p> <p>6.PS.9 Understand the basic language of logic in mathematical situations (and, or, and not).</p> <p>REPRESENTATION STRAND</p> <p><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></p> <p>6.R.8 Use mathematics to show and understand social phenomena (i.e., construct tables to organize data showing book sales).</p> <p>STATISTICS AND PROBABILITY STRAND</p> <p><i>Students will apply and understand concepts of probability.</i></p> <p>5.S.6 Record experiment results using fractions/ratios (POST MARCH IN GRADE 5).</p> <p><i>Students will understand and apply concepts of probability.</i></p> <p>6.S.9 List possible outcomes for compound events (POST MARCH IN GRADE 6).</p> <p style="text-align: right;"><i>(continued)</i></p>	

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEK 31 (continued)			6.S.10 Determine the probability of dependent events (POST MARCH IN GRADE 6). 6.S.11 Determine the number of possible outcomes for a compound event by using the fundamental counting principle and use this to determine the probabilities of events when the outcomes have equal probability (POST MARCH IN GRADE 6).	
	Review and Self-Assessment <i>Suggested Per Period Pacing:</i> 179. Begin Review & Self-Assessment 180. Continue review and self-assessment, p. 652–655; Chapter 10 Test			

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CHAPTER 5: EXPLORING GRAPHS

Algebraic Representations: *Coordinate Graphs—Develop; Tables and Graphs—Develop*
 Coordinate Geometry: *Coordinate Representations—Develop*
 Data Analysis: *Graphs and Displays—Develop; Modeling and Analysis—Develop*

WEEK 32	5.1 Interpreting Graphs Interpreting graphs. Using graphs to find relationships and make predictions. <i>Suggested Per Period Pacing:</i> 181. {Suggested: Explore, p. 278; Investigation (All); Investigation 2, (All)}. 182. Investigation 3: T&D, p. 287; PS F, pp. 287–288; PS G, pp. 288–289; PS H, p.290; S&S, p. 291. 183. QQ, p. A353 TE, IYOW, p. 298.	STATISTICS AND PROBABILITY <i>Students will collect, display, and analyze data.</i> 6.S.7 Read and interpret graphs.	LP: Everyday Math Grade 5 9.1: Hidden Treasure: A Coordinate Game. 9.2: Coordinate Graphs: Part 1. 9.3: Coordinate Graphs: Part 2.
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PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 32–33	<p>5.2 Drawing and Labeling Graphs</p> <p>Interpreting graphs. Creating graphs. Using graphs to find relationships and make predictions.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>184. Explore, p. 300; {Suggested: Investigation 1(All), p. 301; Investigation 2: (All)}.</p> <p>185. Investigation 2: PS C, p. 304; S&S, p. 305.</p> <p>186. Investigation 3: T&D, p. 306; PS D, p. 308; PS E, p. 309; S&S, p. 310.</p> <p>187. QQ, p. 315 TE, IYOW, p. 314.</p>	<p><i>For additional practice or homework:</i></p> <p>Skills Intervention for Middle School Mathematics Workbook</p> <p>Skill 41: The Coordinate System, pp. 81–82.</p> <p>Hot Words, Hot Topics</p> <p>6.6: Graphing on the Coordinate Plane, pp. 282–284, p. 289 (#1–15).</p>	<p>GEOMETRY STRAND</p> <p><i>Students will apply coordinate geometry to analyze problem solving situations.</i></p> <p>5.G.12 Identify and plot points in the first quadrant (POST MARCH IN GRADE 5).</p> <p>STATISTICS AND PROBABILITY</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>6.S.7 Read and interpret graphs.</p>	<p>LP: Everyday Math Grade 5</p> <p>9.2: Coordinate Graphs: Part 1. 9.3: Coordinate Graphs: Part 2.</p>

PACING	IMPACT TEXTBOOK <i>PS: Problem Set</i> <i>QQ: Quick Quiz</i> <i>IYOW: In Your Own Words</i> <i>T&D: Think and Discuss</i> <i>S&S: Share and Summarize</i> <i>E: Example</i>	HOT WORDS, HOT TOPICS SKILLS INTERVENTION	NEW YORK STATE MATHEMATICS STANDARDS	NOTES <i>N: Notes</i> <i>LP: Links to the Past</i> <i>LC: Literature Connections</i> <i>CC: Computer Connections</i>
WEEKS 33–34	<p>5.3 Using Graphs to Find Relationships</p> <p>Interpreting graphs. Creating graphs. Using graphs to find relationships and make predictions.</p> <p><i>Suggested Per Period Pacing:</i></p> <p>188. {Suggested: Explore, p. 317}; Investigation 1: PS A, p. 318; S&S, p. 318. Investigation 2: PS B, pp. 319–320; S&S, p. 320</p> <p>189. Investigation 3: PS C, p. 320; T&D, p. 321; PS D, pp. 322–323; S&S, p. 323.</p> <p>190. {Suggested: Lab Investigation, pp. 324–326}.</p> <p>191. QQ, p. A357 TE; IYOW, p. 333.</p>	<p>Skills Intervention Workbook</p> <p>Skill 41: The Coordinate System, pp. 81–82.</p> <p>Hot Words, Hot Topics</p> <p>6.6: Graphing on the Coordinate Plane, pp. 282–284, p. 289 (#1–15).</p>	<p>GEOMETRY STRAND</p> <p><i>Students will apply coordinate geometry to analyze problem solving situations.</i></p> <p>5.G.12 Identify and plot points in the first quadrant (POST MARCH IN GRADE 5).</p> <p>STATISTICS AND PROBABILITY</p> <p><i>Students will collect, organize, display, and analyze data.</i></p> <p>Analysis of data</p> <p>6.S.7 Read and interpret graphs</p>	
WEEK 35	<p>Review and Self-Assessment</p> <p>192. Review & Self-Assessment, pp. 336–339.</p> <p>193. Chapter 5 Test</p>			

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