



© 2009

STANDARDS	PAGE REFERENCES
<p><b>Algebraic Reasoning: Patterns And Functions</b> – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.</p> <p><b>How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?</b></p>	
<p><b>Students should...</b></p>	
<p><b>1.1</b> <b>Understand and describe patterns and functional relationships.</b></p>	
<p>a. Describe and extend patterns.</p>	<p><b>Student Edition:</b>  <i>Number Patterns</i> 333-334  <i>Patterns</i> 39-40  <i>Patterns on a Hundred Chart</i> 43-44  <i>Problem-Solving Strategy</i> 255-256, 353-354</p> <p><b>Teacher Edition:</b>  As 40, 256, 334; ATS 40, 44, 256, 334; BMV 39A; EF 39B, 43B; ELL 39B, 43B; I 43; PSP 39B, 43B; T 39, 43, 333</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  5-6</p> <p><b>Teacher Guide:</b>  A T6; I T5</p>

STANDARDS	PAGE REFERENCES
<p>b. Analyze change in terms of quantity and quality using patterns.</p>	<p><b>Student Edition:</b>  <i>H.O.T. Problem 72</i>  <i>Number Patterns 333-334</i>  <i>Patterns 39-40</i>  <i>Patterns on a Hundred Chart 43-44</i>  <i>Problem-Solving Strategy 255-256, 353-354</i></p> <p><b>Teacher Edition:</b>  As 40, 44, 334; ATS 334, 354; BMV 39B; EF 39B, 43B, 333B, 353B; ELL 43B, 333B; GT 97B; PSP 43B, 333B; T 39, 333, 353</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  5-6</p> <p><b>Teacher Guide:</b>  A T6; I T5, T95</p>
<p><b>1.2</b>  <b>Represent and analyze quantitative relationships in a variety of ways.</b></p>	
<p>a. Represent real-life situations using number sentences.</p>	<p><b>Student Edition:</b>  <i>Problem Solving 2</i>  <i>Problem-Solving Strategy 61-62, 185-186</i>  <i>Start Smart 5-6</i></p> <p><b>Teacher Edition:</b>  AAC 6; APK 2, 5-6; ATS 62, 186; E 56; EF 61B, 185B; GT 185B; PSP 97B; R 185; T 185; WIM 186</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  37-38, 40, 42, 50, 52, 62, A 22</p> <p><b>Teacher Guide:</b>  A T36, T50; I T35, T37; MBN T52; MMMA T42; R T36; WSS T62</p>

STANDARDS	PAGE REFERENCES
<p><b>1.3</b> Use operations, properties and algebraic symbols to determine equivalence and solve problems.</p>	
<p>a. Represent quantities that have the same value with an equal sign.</p>	<p><b>Student Edition:</b>  <i>Addition Properties</i> 55-56  <i>Compare Numbers</i> 35-36  <i>Count On to Add</i> 57-58  <i>H.O.T. Problem</i> 72  <i>Use Doubles to Subtract</i> 91-92</p> <p><b>Teacher Edition:</b>  As 92; ATS 36, 56, 58; E 56, 72, 92; EF 35B; ELL 55B, 289B; PSP 55B; R 35, 55, 91</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  27, 29-30, 35-38, 47-50</p> <p><b>Teacher Guide:</b>  A T28, T38; R T28, T36, T48</p>
<p><b>Numerical and Proportional Reasoning</b> – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.</p> <p><b>How are quantitative relationships represented by numbers?</b></p>	
<p><b>Students should...</b></p>	
<p><b>2.1</b> Understand that a variety of numerical representations can be used to describe quantitative relationships.</p>	
<p>a. Represent three-digit numbers as groups of hundreds, tens and ones in the base ten place value system.</p>	<p><b>Student Edition:</b>  <i>Hundreds</i> 313-314  <i>Hundreds, Tens, and Ones</i> 315-316  <i>Regroup Ones</i> 441-442  <i>Regroup Tens</i> 443-444</p> <p><b>Teacher Edition:</b>  As 314, 316; ATS 314, 316; BL 315B; E 314; EF 313B, 315B; ELL 315B, 439B; I 313; R 441, 443; T 313, 315, 441</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  15-16, 19-20, A5</p> <p><b>Teacher Guide:</b>  A T16, T20; I T16, T19; R T16</p>

STANDARDS	PAGE REFERENCES
<p>b. Represent fractions by sharing portions of equal size as parts of a whole or parts of a set.</p>	<p><b>Student Edition:</b>  <i>Are You Ready?</i> 280  <i>Chapter Review/Test</i> 305-306  <i>Other Fractions</i> 285-286  <i>Problem-Solving Strategy</i> 287-288  <i>Unit Fractions</i> 283-284</p> <p><b>Teacher Edition:</b>  ATS 286; BL 283B; GT 285B; M 279G; PSP 283B, 285B; T 285</p>
<p>c. Recognize that the denominator of a fraction tells how many equal parts an object or a set has been divided into, and the numerator indicates how many of the parts are being considered.</p>	<p><b>Student Edition:</b>  <i>Fractions Equal to 1</i> 289-290  <i>Other Fractions</i> 285-286  <i>Problem-Solving Strategy</i> 287-288  <i>Unit Fractions</i> 283-284  <i>Writing in Math</i> 284</p> <p><b>Teacher Edition:</b>  As 286, 294, 298; ATS 284, 288; ELL 283B; GT 285B; I 283; PSP 283B, 285B; R 287; T 283, 289</p>
<p>d. Describe relationships between quantities using ratios.</p>	<p><b>Student Edition:</b>  <i>Compare Fractions</i> 293-294  <i>Equivalent Fractions</i> LA7-LA8  <i>Problem Solving</i> 290  <i>Problem-Solving Investigation</i> 301-302  <i>Problem-Solving Strategy</i> 287-288  <i>Unit Fractions of a Group</i> 297-298</p> <p><b>Teacher Edition:</b>  ATS 294, 298, 302; BL 287B; GT 293B; GP 294; HP 294; PS 293B; R 293; T 287, 293, 297, LA7</p>

STANDARDS	PAGE REFERENCES
<p><b>2.2</b>  <b>Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.</b></p>	
<p>a. Develop fact families of basic facts using the inverse relationship of addition and subtraction.</p>	<p><b>Student Edition:</b>  <i>Fact Families</i> 103-104  <i>Missing Addends</i> 101-102  <i>Related Addition to Subtraction</i> 97-98  <i>Start Smart</i> 6</p> <p><b>Teacher Edition:</b>  AAC 6; APK 5; As 98, 104; ATS 98, 102, 104; EF 97B, 101B; ELL 97B, 103B; HP 98; PSP 97B, 101B, 103B; R 97; SP 97, 103; T 97, 101</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  35-38</p> <p><b>Teacher Guide:</b>  A T36, T38; I T35, T37; R T36</p>
<p>b. Explore the relationship of multiplication and division through a variety of methods.</p>	<p><b>Student Edition:</b>  <i>Concepts and Skills Bank</i> CS11-CS12  <i>Equal Groups</i> 475-476  <i>Math at Home</i> 471  <i>Multiplication and Division Fact Families</i> LA5-LA6  <i>Multiplication Stories</i> 473-474  <i>Problem-Solving Strategy</i> 477-478  <i>Repeated Addition</i> 479-480</p> <p><b>Teacher Edition:</b>  ATS 474, 476, 478, 480; BL 473B, 477B; CP 471; ELL 473B, 479B; GT 475B; HP 474; MAH 471; PSP 473B, 475B; T 473, 475, 477, 479</p>
<p>c. Identify and use equivalent representations of numbers to estimate and compute.</p>	<p><b>Student Edition:</b>  <i>Estimate Amounts</i> 29-30  <i>Estimate Differences</i> 199-200  <i>Estimate Sums</i> 163-164, 447-448</p> <p><b>Teacher Edition:</b>  As 164, 200; ATS 30, 448; DI 29B, 199B; T 29, 163, 199, 447</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  43, 47, 67-68</p> <p><b>Teacher Guide:</b>  A T48, T68; I T47; R T48</p>

STANDARDS	PAGE REFERENCES
<p><b>Geometry and Measurement</b> – Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies.</p> <p><b>How do geometric relationships and measurements help us to solve problems and make sense of our world?</b></p>	
<p><b>Students should...</b></p>	
<p><b>3.1</b>  <b>Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.</b></p>	
<p>a. Identify shapes as the same when there are changes in position.</p>	<p><b>Student Edition:</b>  <i>Concepts and Skills Bank</i> CS6  <i>Identify Congruent Figures</i> LA11-LA12  <i>Practice</i> 348  <i>Start Smart</i> 9  <i>Three-Dimensional Figures</i> 345-346  <i>Two-Dimensional Figures</i> 351-352</p> <p><b>Teacher Edition:</b>  APK CS6; ATS 346; E 346; I 345; WIM 346, 360</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  93, 99</p> <p><b>Teacher Guide:</b>  A T100; I T99; R T100; UO T94; V T93</p>
<p><b>3.2</b>  <b>Use spatial reasoning, location and geometric relationships to solve problems.</b></p>	
<p>a. Recognize and use geometric relationships to solve problems.</p>	<p><b>Student Edition:</b>  <i>Equivalent Fractions</i> LA7-LA8  <i>Problem-Solving Strategy</i> 287-288, 353-354</p> <p><b>Teacher Edition:</b>  ATS 354; BL 347B; E 288; EF 353B; ELL 353B; HP 354; R 353; T 353</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  95-98, A37-A38</p> <p><b>Teacher Guide:</b>  A T96, T98; I T95, T97</p>

STANDARDS	PAGE REFERENCES
<p><b>3.3</b>  <b>Develop and apply units, systems, formulas and appropriate tools to estimate and measure.</b></p>	
<p>a. Estimate and measure the length of time to complete activities and tasks.</p>	<p><b>Student Edition:</b>  <i>Estimate Time</i> 249-250  <i>Practice</i> 251-252  <i>Problem-Solving Investigation</i> 271-272  <b>Teacher Edition:</b>  ATS 251; DI 249B; HP 252; R 249, 271; SP 250; T 250, 271; WIM 251</p>
<p>b. Measure through direct comparison and through repetition of units.</p>	<p><b>Student Edition:</b>  <i>Are You Ready?</i> 376  <i>Measure Inches Using Models</i> 381-382  <i>Non-Standard Units</i> 379-380  <i>Start Smart</i> 7-8  <i>Use a Centimeter Ruler</i> 393-394  <i>Use an Inch Ruler</i> 387-388  <b>Teacher Edition:</b>  A 375G; AAC 8; APK 7; As 382, 388; ATS 380, 382; CP 377; DI 379B, 381B, 385B; T 379, 381, 387, 393  <i>Impact Mathematics Grade 2</i>  <b>Student Edition:</b>  68-70, 80, A26  <b>Teacher Guide:</b>  A T68, T80; I T67, T69; PBA T64D; R T70, T80</p>

STANDARDS	PAGE REFERENCES
<p><b>Working with Data: Probability and Statistics</b> – Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies.</p> <p><b>How can collecting, organizing and displaying data help us analyze information and make reasonable predictions and informed decisions?</b></p>	
<p><b>Students should...</b></p>	
<p><b>4.1</b>  <b>Collect, organize and display data using appropriate statistical and graphical methods.</b></p>	
<p>a. Construct graphs from data, then make comparisons and draw conclusions.</p>	<p><b>Student Edition:</b>  <i>Bar Graphs</i> 127-128  <i>Concepts and Skills Bank</i> CS1-CS3  <i>Picture Graphs</i> 119-120  <i>Project 1</i> P3  <i>Project 3</i> P14  <i>Project 4</i> P17-P18</p> <p><b>Teacher Edition:</b>  A 113H; APK CS1, CS3; ATS 120; BL 119B;  DI 121B; EF 127B; ELL 127B; T 119, 121, 127</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  22, 80</p> <p><b>Teacher Guide:</b>  A T80; HMDS T22; I T79</p>
<p><b>4.2</b>  <b>Analyze data sets to form hypotheses and make predictions.</b></p>	
<p>a. Determine patterns and make predictions from data displayed in tables and graphs.</p>	<p><b>Student Edition:</b>  <i>Analyze Bar Graphs</i> 129-130  <i>Analyze Picture Graphs</i> 121-122  <i>Problem-Solving Strategy</i> 123-124  <i>Take A Survey</i> 117-118</p> <p><b>Teacher Edition:</b>  As 118, 130; ATS 118, 122; DI 117B, 121B, 129B;  I 121, 129; T 117, 121, 123, 129</p> <p><b>Impact Mathematics Grade 2</b></p> <p><b>Student Edition:</b>  22, 80</p> <p><b>Teacher Guide:</b>  A T80; HMDS T22</p>

STANDARDS	PAGE REFERENCES
<p><b>4.3</b>  <b>Understand and apply basic concepts of probability.</b></p>	
<p>a. Analyze data gathered from experiments and identify the likelihood of future events.</p>	<p><b>Student Edition:</b>  <i>Chapter Review/Test</i> 140  <i>Describe Events</i> 133-134</p> <p><b>Teacher Edition:</b>            BMV 133A; DI 133B; I 133, T 133, WIM 134</p>