



Math Connects

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STANDARDS	PAGE REFERENCES
<p>Standard 1: Number and Computation</p>	
<p>Standard 1: Number and Computation – The student uses numerical and computational concepts and procedures in a variety of situations.</p>	
<p>Benchmark 1: Number Sense – The student demonstrates number sense for whole numbers, fractions, and money using concrete objects in a variety of situations.</p>	
<p>1. establishes a one-to-one correspondence with whole numbers from 0 through 20 using concrete objects and identifies, states, and writes the appropriate cardinal number (2.4.K1a) (\$).</p>	<p>Student Edition: 27-28, 29-30, 31-32, 57-58, 115-116 <i>Chapter Review</i> 35, 63 <i>Spiral Review</i> 36, 64 <i>Start Smart</i> 3-4 Teacher Edition: A 28, 30; FMC 27A, 29A, 30A, 45A, 55A; O 27A, 29A, 30A, 57A, 115A</p>
<p>2. compares and orders whole numbers from 0 through 20 using concrete objects (2.4.K1a) (\$).</p>	<p>Student Edition: 57-58, 59-60, 115-116, 117-118, 165-166, 167-168 <i>Chapter Review</i> 171 <i>Problem-Solving Projects</i> P15-P18 <i>Spiral Review</i> 64, 172 <i>Test Practice</i> 66, 126 #4 Teacher Edition: ATS 57, 115, 165; FMC 57A, 59A, 115A, 117A, 165A, 167A</p>

STANDARDS	PAGE REFERENCES
3. recognizes a whole, a half, and parts of a whole using concrete objects (2.4.K1a,c) (\$), e.g., half a pizza, part of a cookie, or the whole school.	Student Edition: 269-270 <i>Chapter Review 275</i> <i>Looking Ahead LA13-LA14</i> Teacher Edition: A 270; FMC 269A; LA LA13A; O 269A
4. identifies positions as first and last (2.4.K1a).	Student Edition: 119-120 <i>Problem-Solving Projects P10</i>
5. identifies pennies and dimes and states the value of the coins using money models (2.4.K1d) (\$).	Student Edition: <i>Concepts and Skills Bank CS1-CS2</i>
Benchmark 2: Number Systems and Their Properties – The student demonstrates an understanding of whole numbers with a special emphasis on place value in a variety of situations.	
1. reads and writes whole numbers from 0 through 20 in numerical form (\$).	Student Edition: 45-46, 49-50, 55-56, 105-106, 111-112 <i>Chapter Review 171</i> <i>Mid-Chapter Check 51, 107</i> Teacher Edition: ATS 45; FMC 49A, 55A, 105A, 111A
2. represents whole numbers from 0 through 20 using place value models (2.4.K1b) (\$), e.g., ten frames, unifix cubes, straws bundled in 10s, or base ten blocks.	Student Edition: 155-156, 157-158, 163-164, 167-168 <i>Looking Ahead LA9-LA10</i> <i>Mid-Chapter Check 159</i> Teacher Edition: CCL 149H(LA); CP 151; DI 111B; FMC 157A, 163A, 167A, 169A; O 155A
3. counts (2.4.K1a) (\$): a. whole numbers from 0 through 20, b. whole numbers from 10 to 0 backwards, c. subsets of whole numbers from 0 through 20.	Student Edition: 43-44, 47-48, 101-102, 103-104, 109-110, 113-114, 117-118, 163-164 <i>Game Time 160</i> <i>Problem Solving 61-62, 121-122, 169-170</i> <i>Problem-Solving Projects P3-P6</i> <i>Problem-Solving Strategy 53-54</i> Teacher Edition: ATS LA5; CCL 39G(S), 97G(S)(R), 97H(SS); CP 99, 151; FMC 43A, 47A, 101A, 104A, 109A, 163A

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<p>4. groups objects by 5s and by 10s (2.4.K1a).</p>	<p>Student Edition: 47-48, 49-50, 155-156, 157-158, 163-164, 167-168, 217-218 <i>Chapter Project</i> 99, 151 <i>Looking Ahead</i> LA9-LA10 <i>Mid-Chapter Check</i> 51, 159</p> <p>Teacher Edition: CCL 149H(LA); FMC 47A, 49A, 157A, 163A, 167A, 217A, LA9A</p>
<p>5. uses the concept of the zero property of addition (additive identity) with whole numbers from 0 through 20 and demonstrates its meaning using concrete objects (2.4.K1a) (\$), e.g., 4 apples and no (zero) other apples are 4 apples.</p>	<p>The following pages can be used with teacher assistance and an explanation of <i>property</i>.</p> <p>Student Edition: 294 #1, #2, 295 #9, #10, 297 #1-#2, 299 #1, #2, 301 #2, #3, 303 #1, #2</p>
<p>Benchmark 3: Estimation – The student uses computational estimation with whole numbers in a variety of situations.</p>	
<p>1. determines if a group of 20 concrete objects or less has more, less, or about the same number of concrete objects as a second set of the same kind of objects (2.4.K1a).</p>	<p>Student Edition: 27-28, 29-30, 31-32, 57-58 <i>Chapter Review</i> 35 <i>Mid-Chapter Check</i> 51 #2 <i>Problem Solving</i> 33-34 <i>Spiral Review</i> 36 <i>Test Practice</i> 37-38</p> <p>Teacher Edition: A 28, 30; FMC 27A, 29A, 31A, 57A</p>
<p>Benchmark 4: Computation – The student models, performs, and explains computation with whole numbers using concrete objects in a variety of situations.</p>	
<p>1. adds and subtracts using whole numbers from 0 through 10 and various mathematical models (2.4.K1a) (\$), e.g., concrete objects, number lines, or unifix cubes.</p>	<p>Student Edition: 283-286, 287-288, 293-296, 297-304, 317-320, 321-322, 323-324, 325-328, 331-338 <i>Chapter Review</i> 309, 345 <i>Game Time</i> 290, 330 <i>Problem Solving</i> 307-308, 343-344 <i>Problem-Solving Strategy</i> 305-306 <i>Test Practice</i> 311, 347</p> <p>Teacher Edition: CCL 279G(T), 279H(M), 313G(SS)(H), 13H(LA)(S); CP 281, 315; CT 313H, FMC 283A, 287A, 293A, 297A, 305A, 317A, 321A, 323A</p>

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<p>2. uses repeated addition (multiplication) with whole numbers to find the sum when given the number of groups (three or less) and given the same number of concrete objects in each group (five or less) (2.4.K1a), e.g., two nests with three eggs in each nest means $3 + 3 = 6$ or 2 groups of 3 makes 6.</p>	<p>See <i>Math Connects 1</i> © 2009 Student Edition: 169-170, 319-320</p>
<p>3. uses repeated subtraction (division) with whole numbers when given the total number of concrete objects in each group to find the number of groups (2.4.K1a), e.g., there are 9 pencils. If each student gets 2 pencils, how many students get pencils? $9 - 2 - 2 - 2 - 2$ or 9 minus 2 four times means four students get 2 pencils each and there is 1 pencil left over. <i>or</i> There are eight cookies to be shared equally among four people, how many cookies will each person receive?</p>	<p>See <i>Math Connects 1</i> © 2009 Student Edition: 195-196, 329-330</p>
<p>Standard 2: Algebra</p>	
<p>Standard 2: Algebra – The student uses algebraic concepts and procedures in a variety of situations.</p>	
<p>Benchmark 1: Patterns – The student recognizes, describes, extends, develops, and explains relationships in patterns using concrete objects in a variety of situations.</p>	
<p>1. uses concrete objects, drawings, and other representations to work with types of patterns (2.4.K1a):</p> <p>a. repeating patterns, e.g., an AB pattern is like red-blue, red-blue, ...; an ABC pattern is like dog-horse-pig, dog-horse-pig, ...; or an AAB pattern is like $\Delta-\Delta-O$, $\Delta-\Delta-O$, ...;</p> <p>b. growing (extending) patterns, e.g., 5, 6, 7, ... is an example of a pattern that adds one to the previous number to continue the pattern.</p>	<p>Student Edition: 77-78, 81-82, 83-84, 85-86, 87-88 <i>Game Time</i> 80 <i>Problem Solving</i> 91-92, 135-136 <i>Problem-Solving Projects</i> P3-P6 <i>Problem-Solving Strategy</i> 84-85 <i>Start Smart</i> 5-6 Teacher Edition: AC 6; CCL 67G(T); CT 85, 87; DI 77B, 81B; 5MC 85A, 87A</p>

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<p>2. uses these attributes to generate patterns:</p> <p>a. whole numbers (2.4.K1a), e.g., 2, 4, 6, ...;</p> <p>b. geometric shapes with one attribute change (2.4.K1e), e.g., Δ, O, Δ, O, Δ, O, ...;</p> <p>c. things related to daily life (2.4.K1a), e.g., breakfast, lunch, and dinner.</p>	<p>Student Edition: 77-78, 81-82, 83-84, 85-86, 87-88, 229-230, 235-236 <i>Game Time</i> 80 <i>Mid-Chapter Check</i> 237 <i>Problem Solving</i> 91-92 <i>Problem-Solving Projects</i> P3-P6, P7-P10, P11-P14 <i>Problem-Solving Strategy</i> 243 <i>Test Practice</i> 250 #5-#6</p> <p>Teacher Edition: A 230; CCL 67G(A)(T); DI 77B, 229B, 235B; FMC 229A, 235A; HS 91</p>
<p>3. identifies and continues a pattern presented in various formats including numeric (list or table), visual (picture, table, or graph), verbal (oral description), and kinesthetic (action) (2.4.K1a) (\$).</p>	<p>Student Edition: 81-82, 83-84, 85-86, 87-88, 89-90, 139-140, 141-142 <i>Mid-Chapter Check</i> 137 <i>Problem Solving</i> 143-144 <i>Problem-Solving Projects</i> P3-P6, P7-P10, P11-P14, P15-P18 <i>Problem-Solving Strategy</i> 135-136</p> <p>Teacher Edition: FMC 139A, 141A</p>
<p>4. generates (2.4.K1a):</p> <p>a. repeating patterns for the AB pattern, the ABC pattern, and the AAB pattern;</p> <p>b. growing (extending) patterns that add 1, 2, or 10 to continue the pattern.</p>	<p>Student Edition: 83-84, 85-86, 87-88, 89-90 <i>Game Time</i> 80 <i>Mid-Chapter Check</i> 79 <i>Problem-Solving Strategy</i> 84-85, 135-136 <i>Test Practice</i> 96</p> <p>Teacher Edition: CCL 67G, 67H; CT 81, 83, 87, 89; DI 77B; T 81; 5MC 81A, 83A, 87A, 89A</p>
<p>5. classifies and sorts concrete objects by similar attributes (2.4.K1a) (\$).</p>	<p>Student Edition: 17-18, 19-20, 21-22, 23-24 <i>Game Time</i> 26 <i>Mid-Chapter Check</i> 25 <i>Problem Solving</i> 33-34 <i>Problem-Solving Strategy</i> 21-22 <i>Start Smart</i> 5-6</p> <p>Teacher Edition: AC 6; CCL 67G; CP 15, 69; FMC 17A, 19A, 21A, 23A</p>

STANDARDS	PAGE REFERENCES
<p>Benchmark 2 Variables, Equations, and Inequalities – The student solves addition equations using concrete objects in a variety of situations.</p>	
<p>1. finds the unknown sum using the basic facts with sums through 10 using concrete objects and pictures (2.4.K1a) (\$), e.g., 5 marbles + 5 marbles = ∇.</p>	<p>Student Edition: 283-286, 287-288, 293 <i>Game Time</i> 290 <i>Problem-Solving Strategy</i> 305-306 <i>Test Practice</i> 311-312 Teacher Edition: CCL 279H(M); CP 281; FMC 283A, 293A</p>
<p>Benchmark 3: Functions – The student recognizes and describes whole number relationships using concrete objects in a variety of situations.</p>	
<p>1. locates whole numbers from 0 through 20 on a number line (2.4.K1a).</p>	<p>Student Edition: 167-168 <i>Chapter Review</i> 171 Teacher Edition: FMC 167A</p>

STANDARDS	PAGE REFERENCES
Benchmark 4: Models – The student uses mathematical models including concrete objects to represent, show, and communicate mathematical relationships in a variety of situations.	
<p>1. knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include:</p> <ul style="list-style-type: none"> a. process models (concrete objects, pictures, number lines, unifix cubes, measurement tools, or calendars) to model computational procedures and mathematical relationships, to compare and order numerical quantities, and to represent fractional parts (1.1.K1-4, 1.2.K3-5, 1.3.K1, 1.4.K1-3, 2.1.K1, 2.1.K2a, 2.1.K2c, 2.1.K3-5 2.2.K1, 2.3.K1, 3.1.K2, 3.2.K1-3, 3.3.K1-2, 3.4.K1-2) (\$); b. place value models (ten frames, unifix cubes, bundles of straws, or base ten blocks) to represent numerical quantities (1.2.K2) (\$); c. fraction models (fraction strips or pattern blocks) to represent numerical quantities (1.1.K3) (\$); d. money models (base ten blocks or coins) to represent numerical quantities (1.1.K5) (\$); e. two-dimensional geometric models (geoboards, dot paper, or attribute blocks), three-dimensional geometric models (solids), and real-world objects to compare size and to model attributes of geometric shapes (2.1.K1a, 3.1.K3); f. two-dimensional geometric models (spinners), three-dimensional geometric models (number cubes), and concrete objects to model probability (4.1.K1-2) (\$); g. graphs using concrete objects, pictographs, and frequency tables to organize and display data (4.2.K1-3) (\$). 	<p>Student Edition: 27-28, 29-30, 31-32, 57-58, 59-60, 77-78, 81-82, 83-84, 85-86, 87-88, 115-116, 117-118, 131-132, 133-134, 139-140, 141-142, 155-156, 157-158, 163-164, 165-166, 167-168, 255-256, 257-258, 261-262, 263-264, 269-270, 271-272 <i>Concepts and Skills Bank</i> CS1-CS4 <i>Looking Ahead</i> LA3-LA14 <i>Problem-Solving Projects</i> P3-P18 <i>Start Smart</i> 1-12</p> <p>Teacher Edition: CCL 39H, 97H(LA), 149H(LA), 175G(S), 251G, 251H; CP 15, 99, 151, 177; CT 13H, 97H, 127H, 175H</p>

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<p>2. uses concrete objects, pictures, drawings, diagrams, or dramatizations to show the relationship between two or more things (\$).</p>	<p>Student Edition: 17-18, 19-20, 23-24, 29-30, 31-32, 71-72, 73-74, 75-76, 255-256, 257-258, 261-262, 264-265 <i>Chapter Review</i> 35 <i>Mid-Chapter Check</i> 25 <i>Problem-Solving Projects</i> P3-P18 <i>Problem-Solving Strategy</i> 21-22, 267-268 <i>Start Smart</i> 9-10</p> <p>Teacher Edition: ATS 255, 261; CP 15, 253; CT 251G(T), 251H; FMC 17A, 23A, 29A, 255A, 257A, 261A, 263A</p>
<p>Standard 3: Geometry</p>	
<p>Standard 3: Geometry – The student uses geometric concepts and procedures in a variety of situations.</p>	
<p>Benchmark 1: Geometric Figures and Their Properties – The student recognizes geometric shapes and their attributes using concrete objects in a variety of situations.</p>	
<p>1. recognizes circles, squares, rectangles, triangles, and ellipses (ovals) (plane figures/ two-dimensional figures) (2.4.K1e).</p>	<p>Student Edition: 261-262, 263-264, 271-272 <i>Game Time</i> 266 <i>Problem Solving</i> 273-274 <i>Problem-Solving Projects</i> P11-P14 <i>Start Smart</i> 9-10</p> <p>Teacher Edition: CCL 251G(R)(T); FMC 261A, 263A, 271A; IC 251</p>
<p>2. recognizes and investigates attributes of circles, squares, rectangles, triangles, and ellipses using concrete objects, drawings, and/or appropriate technology (2.4.K1a,e).</p>	<p>Student Edition: 271-272 <i>Problem Solving</i> 273-274</p> <p>Teacher Edition: CCL 251G(T); CT 251H; FMC 271A</p>
<p>3. sorts cubes, rectangular prisms, cylinders, cones, and spheres (solids/three-dimensional figures) by their attributes using concrete objects (2.4.K1e).</p>	<p>Student Edition: 255-256, 257-258 <i>Mid-Chapter Check</i> 265 <i>Problem-Solving Projects</i> P9 <i>Test Practice</i> 277</p> <p>Teacher Edition: CCL 251G(R), 251H(SS); CP 253; FMC 255A, 257A</p>

STANDARDS	PAGE REFERENCES
<p>Benchmark 2: Measurement and Estimation – The student estimates and measures using standard and nonstandard units of measure with concrete objects in a variety of situations.</p>	
<p>1. uses whole number approximations (estimations) for length using nonstandard units of measure (2.4.K1a) (\$), e.g., the classroom door is about two kindergartners high or this paper is about two pencils long.</p>	<p>See <i>Math Connects 1</i> © 2009 Student Edition: 279-280</p>
<p>2. compares two measurements using these attributes (2.4.K1a) (\$): a. longer, shorter (length); b. taller, shorter (height); c. heavier, lighter (weight); d. hotter, colder (temperature).</p>	<p>Student Edition: 179-180, 181-182, 183-184, 185-186 <i>Chapter Review</i> 197 <i>Mid-Chapter Check</i> 187 <i>Problem-Solving Projects</i> P11-P14 <i>Test Practice</i> 199-200 Teacher Edition: A 180, 184; CP 177; FMC 179A, 181A, 183A, 185A</p>
<p>3. reads and tells time at the hour using analog and digital clocks (2.4.K1a).</p>	<p>Student Edition: 239-240, 241-242 <i>Chapter Review</i> 247 <i>Problem-Solving Strategy</i> 243-244 <i>Test Practice</i> 250 Teacher Edition: FMC 239A, 241A</p>
<p>Benchmark 3: Transformational Geometry – The student develops the foundation for spatial sense using concrete objects in a variety of situations.</p>	
<p>1. describes the spatial relationship between two concrete objects using appropriate vocabulary (2.4.K1a), e.g., behind, above, below, on, or under.</p>	<p>Student Edition: 71-72, 73-74, 75-76 <i>Mid-Chapter Check</i> 79 <i>Start Smart</i> 2 Teacher Edition: AS 72; CP 69; DI LA7(ELL)</p>
<p>2. identifies two like objects or shapes from a set of four objects or shapes (2.4.K1a).</p>	<p>Student Edition: 17-18, 19-20, 23-24 <i>Chapter Review</i> 35 <i>Mid-Chapter Check</i> 25 <i>Problem-Solving Strategy</i> 21-22 <i>Spiral Review</i> 36 <i>Start Smart</i> 9-10 Teacher Edition: CP 15; FMC 17A, 19A, 23A</p>

STANDARDS	PAGE REFERENCES
<p>Benchmark 4: Geometry From An Algebraic Perspective – The student identifies one or more points on a number line in a variety of situations.</p>	
<p>1. locates and plots whole numbers from 0 through 20 on a horizontal number line (2.4.K1a).</p>	<p>Student Edition: 167-168 <i>Chapter Review</i> 171 Teacher Edition: FMC 167A</p>
<p>2. counts forwards and backwards from a given whole number from 0 through 10 on a number line (2.4.K1a).</p>	<p>Student Edition: 43-44, 101-102, 103-104, 109-110 <i>Game Time</i> 52, 108 Teacher Edition: ATS LA5; CCL 39G(H), 97G(S)(R); CP 99; FMC 43A, 53A, 109A</p>
<p>Standard 4: Data</p>	
<p>Standard 2: Data – The student uses concepts and procedures of data analysis in a variety of situations.</p>	
<p>Benchmark 1: Probability – The student applies the concepts of probability using concrete objects in a variety of situations.</p>	
<p>1. recognizes whether an event is impossible or possible (2.4.K1f) (\$), e.g., the possibility of a person having ten heads is impossible, while the possibility of a person having red hair is possible.</p>	<p>See <i>Math Connects 1</i> © 2009 Student Edition: 136</p>
<p>2. recognizes and states whether a simple event in an experiment or simulation including the use of concrete objects can have more than one outcome (2.4.K1a,f).</p>	<p>See <i>Math Connects 2</i> © 2009 Student Edition: <i>Problem-Solving Investigation</i> 135-136 <i>Problem-Solving Strategy</i> 317-318</p>
<p>Benchmark 2: Statistics – The student collects, records, and explains numerical (whole numbers) and non-numerical data sets including the use of concrete objects in a variety of situations.</p>	
<p>1. records numerical (quantitative) and non-numerical (qualitative) data including concrete objects, graphs, and tables using these data displays (2.4.K1a,g) (\$):</p> <ul style="list-style-type: none"> a. graphs using concrete objects, b. pictographs with a whole symbol or picture representing one (no partial symbols or pictures), c. frequency tables (tally marks). 	<p>Student Edition: 131-132, 133-134, 139-140, 141-142 <i>Mid-Chapter Check</i> 137 <i>Problem Solving</i> 143-144 <i>Problem-Solving Projects</i> P11-P14, P15-P18 Teacher Edition: CCL 127H(T); CP 129; CT 127H; FMC 131A, 133A, 139A, 141A</p>

STANDARDS	PAGE REFERENCES
<p>2. collects data related to familiar everyday experiences by counting and tallying (2.4.K1a,g) (\$).</p>	<p>Student Edition: 131-132, 139-140, 141-142 <i>Game Time</i> 138 <i>Problem Solving</i> 143-144 <i>Problem-Solving Projects</i> P11-P14, P15-P18 <i>Problem-Solving Strategy</i> 135-136 <i>Test Practice</i> 147-148 Teacher Edition: CP 129; CT 127H; FMC 131A, 139A, 141A</p>
<p>3. determines the mode (most) after sorting by one attribute (2.4.K1a,g) (\$), e.g., color, shape, or size.</p>	<p>Student Edition: 133-134, 141-142 <i>Chapter Review</i> 145 <i>Game Time</i> 138 <i>Mid-Chapter Check</i> 137 <i>Problem Solving</i> 143-144 <i>Problem-Solving Projects</i> P11-P14, P15-P18 <i>Test Practice</i> 147-148 Teacher Edition: FMC 133A, 141A; I 138</p>