### MATHEMATICS- GRADE 4

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| Students will name and construct geometric figures. (2.9.4.a,d,e,g) | Unit 1 (3 wks) | 1. Describe a line segment and a line.  
2. Compare/contrast plane figures.  
3. Draw quadrangles.  
4. Draw parallel lines, intersecting lines and line segments.  
5. Understand right angles.  
6. Name/identify lines and rays.  
7. Name polygons.  
8. Identify properties of polygons.  
9. Construct circles with compasses.  
10. Solve addition/subtraction facts.  
2. Draw tangent circles.  
3. Create a personal geometry poster to illustrate geometric terms from Unit 1.  
4. Read The Greedy Triangle and Math Curse.  
5. Design a compass to draw a large circle on a playground.  
6. Create a six-point design from a circle.  
7. Shape Surveyor Game [www.funbrain.com](http://www.funbrain.com)  
8. Continental Math League Enrichment Class (on-going throughout the year)  
9. Hands-on Algebra Enrichment Class (on-going throughout the year)  
2. Use relation symbols to compare numbers using Math Masters page 6.  
3. Refer to 5-Minute Math book for reinforcement activities.  
4. Play Subtraction Top-It.  
5. Take a Geometry tour around the building searching for geometric patterns.  
6. Inscribe an equilateral triangle in a circle.  
7. Play Geometry Five Questions to identify a shape.  
8. Play Name That Polygon.  
9. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Unit 1 Assessment  
Study Links  
Unit 1 Quiz  
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| Students will use numbers and organize data. (2.2.4.b,g and 2.6.4.g) | Unit 2 (2-3 wks) | 1. Using a set of data, find the maximum, minimum, range, median, and mode.  
2. Display data with a line plot, bar graph, or tally chart.  
3. Use the statistical landmarks median, mode, and range  
4. Use the statistical landmarks maximum and minimum  
5. Have a successful strategy for subtracting multi-digit numbers  
6. Have a successful strategy for adding multidigit numbers  
7. Read and write numerals to hundred-millions; give the value of the digits in numerals in hundred-millions  
2. Solve Pan-Balance problems.  
3. Solve Number-Grid Puzzles.  
4. Use a map scale to find distances.  
5. Read a book entitled How Much Is a Million?  
6. Play Number Top-It.  
7. Compare family size data.  
8. Determine the validity of “One Size Fits All” claim.  
9. CML – Continental Math League & Hands-on Algebra Enrichment Classes (continued throughout the school year.)  
2. Play Addition-Top-It.  
3. Refer to 5-minute math activities.  
4. Use the World Tour section of the Student Reference Book to find facts for Washington, D.C.  
5. Read a story that illustrates equivalent names: Twelve Ways to Get Eleven.  
6. Practice reading and writing numbers on a calculator.  
7. Model the trade-first method with base-10 blocks.  
8. [www.funbrain.com](http://www.funbrain.com) Math Baseball Game  
   Soccer Shootout  
   Match Car Racing  
9. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Unit 2 Assessment  
Study Links  
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| Students will use multiplication and division and apply it to number sentences and algebra. (2.2.4. and 2.8.4.c) | Unit 3 (3-4 wks) | 2. Explore relationship between multiplication and division facts.  
3. Solve open sentences.  
4. Insert parentheses to make true number sentences and solve problems with parentheses included.  
5. Determine whether number sentences are true or false.  
6. Use and explain strategies for solving addition and subtraction number stories.  
7. Use a map scale to estimate distances.  
8. Solve basic division facts.  
9. Solve basic multiplication facts.  
10. Explore the relationship between multiplication and division.  
1. Write the numbers between 2 whole numbers using decimals.  
2. Solve open number sentences. | | | Study Links  
| | | Unit 3 Quiz  
| | | Math Boxes |
| 1. Play game Division Arrays  
2. Explore the relationship between division and fractions.  
3. Use the internet to find country facts.  
4. Write and solve number stories about air distances.  
5. Write and solve number stories.  
7. Continental Math League Enrichment Class.  
8. Website for Enrichment Activities: [www.yahooligans.com](http://www.yahooligans.com)  
10. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | | 1. Play Name That Number.  
2. Play Multiplication Top-It.  
3. Practice 9-facts with fingers.  
4. Practice multiplication facts with games from Student Reference Book.  
5. Play Name That Number & Broken Calculator.  
6. [www.funbrain.com](http://www.funbrain.com) or [www.multiplication.com](http://www.multiplication.com)  
7. Play Beat the Calculator.  
9. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | | | Unit 4 Assessment |
| Learning Expectations &
(Related Standard) | Content Outline
(Unit/Time) | Activities / Instructional Strategies | Enrichment Options | Reinforcement Options | Assessment Procedures |
|-------------------|-----------------|--------------------------------------|--------------------|----------------------|-----------------------|
| Students will understand decimals and their uses.
(2.1.4.a,d)        | Unit 4
(2-3 wks)       | 3. Measure & draw line segments to the nearest ½ inch.  
4. Read and write decimals to thousandths.  
5. Compare and order decimals.  
6. Draw and measure line segments to the nearest centimeter.  
7. Use personal references to estimate lengths in metric units.  
8. Solve 1-and 2-place decimals addition and subtraction problems.  
9. Use dollar and cent notation. | 1. Design a measurement scavenger hunt.  
2. Explore the use of prefixes in metric units.  
3. Analyze softball batting averages.  
4. Write decimal riddles.  
5. Find a car’s gasoline mileage.  
6. Decimals: [www.yahooligans.com](http://www.yahooligans.com)  
8. Continental Math League Enrichment Class  
2. Play Number Top-It with decimals.  
3. Play Name That Number.  
4. Make and use a place value flip book.  
5. Solve place value puzzles.  
6. Refer to 5-Minute Math Activities for reinforcement.  
7. Count by thousandths.  
8. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Study Links  
Unit 4 Quiz  
Math Boxes  
Unit 5 Assessment  
Study Links |
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| Students will focus on big numbers, estimation, and computation. (2.1.4.a) | Unit 5 (2-3 wks) | 1. Write number models to represent number stories.  
2. Solve open sentences using multiplication & division facts.  
3. Solve division problems with 1 digit divisors and 2 digit dividends.  
2. Play game-Scoring a Dart.  
3. Investigate powers of 10 on a calculator.  
4. Investigate “Napier’s Rods” activity.  
5. Solve multiplication and division puzzles.  
6. Solve a traveling salesperson problem.  
7. Make predictions | 1. Use base-10 blocks for multiplication reinforcement.  
2. Play Product Pile-up game for reinforcement.  
3. Activities from 5-Minute Math activity book.  
5. Model | Unit 5 Quiz  
Math Boxes  
Unit 6 Assessment  
Study Links |
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| Students will understand fractions and their uses as well as understand chance and probability. (2.1.4 and 2.7.4) | Unit 7 (2-3 wks) | 8. Plot coordinates on a grid.  
10. Divide multi-digit numbers by one-digit divisors. | Class  
6. Hands-On Algebra Enrichment Class  
7. Solve elapsed time problems.  
8. Make a model of a world globe.  
9. Geometry Practice  
www.yahooligans.com  
10. Hands-On Algebra Enrichment Class  
11. Continental Math League Enrichment Class  
12. Visit Website:  
http://everydaymath.org/students.htm | equal-grouping problems.  
6. Compare and model angles.  
7. Change Maker Game  
www.funbrain.com  
8. Visit Website:  
http://everydaymath.org/students.htm | Unit 7 Quiz  
Math Boxes |
| 1. Rename fractions with a denominator of 10 or 100 as a decimal and percent.  
2. Use data to create a line graph.  
3. Count squares to find the area of a polygon.  
4. Use formulas to find areas of shapes.  
5. Find the perimeter of a polygon.  
6. Calculate the perimeter of a polygon when the length of one side is equal | 1. Compare actual and expected results of the 1,000 Cube Drop.  
2. Investigate chance events. | 1. Play Fraction Top-It.  
2. Create Base-10 block designs. |
|  |  |  |  |  | Unit 8 Assessment  
Study Links |
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### Unit 8 Quiz
### Study Links
### Unit 9 Assessment
### Unit 9 Quiz
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| Students will understand percents. (2.1.4) | Unit 9 (2-3 wks) | 1. Plot points in the first quadrant of a coordinate grid.  
2. Compare fractions with like numerators or like denominators.  
3. Use a transparent mirror to sketch and describe a reflection.  
4. Describe a pattern and use it to solve a problem.  
5. Identify and sketch an example of a reflection.  
6. Identify examples of translations and rotations.  
7. Express the probability of an event as a fraction. | Math Masters page 249.  
2. Explore different polygons with the same area.  
3. Make a scale drawing of your bedroom.  
4. Constructing figures with a compass and straightedge.  
5. Use division to compare numbers of mammal species.  
6. Continental Math League Enrichment Class  
7. Explore the relationship between the perimeter and area of a rectangle.  
8. Shape Surveyor Game [www.funbrain.com](http://www.funbrain.com)  
9. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | 1. Investigate perimeter and area on a geoboard.  
2. Refer to 5-Minute Math for reinforcement activities.  
3. Converting square inches to square feet.  
4. Find the area of rectangles.  
5. Play “Fraction-Of”.  
6. Play Rugs and Fences  
7. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Math Boxes  
Unit 10 Assessment  
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| Students will understand symmetry and reflections. (2.9.4) | Unit 10 (3 wks) | 1. Describe a translation.  
2. Describe a rectangular prism.  
3. Find multiples of whole numbers less than 10.  
4. Demonstrate automaticity with multiplication facts and proficiency with division facts.  
5. Find the volume of stacks of centimeter cubes.  
6. Identify an example of a rotation.  
7. Describe the relationships among U.S. customary units of length & among metric units of length. | 1. Write and solve “Percent-Of” number stories.  
2. Solve Discount number stories.  
3. Make a percent booklet.  
4. Estimate what percent of a circle graph is shaded.  
5. Graph survey results.  
6. Percents game [www.yahooligans.com](http://www.yahooligans.com)  
7. Display Literacy data on Math Masters pages 293 and 295.  
9. Continental Math League Enrichment Class  
2. Refer to 5-Minute Math booklet for reinforcement activities.  
3. Find & memorize equivalent names for easy fractions.  
4. Read book entitled *Eating Fractions*.  
5. Use a calculator to rename fractions as percents.  
6. Memorize equivalent names for “easy” fractions.  
8. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Math Boxes |

**Unit 11 Assessment**

**Study Links**

**Unit 11 Quiz**

**Math Boxes**
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| Students will explore shapes, weight, volume, and capacity. (2.9.4 and 2.1.4) | Unit 11 (2 wks) | 1. Write number sentences comparing two numbers between 100 and -100.  
2. Describe the rule for a pattern and use that rule to solve problems.  
3. Use given data to create a line graph.  
4. Insert parentheses in number sentences to make them true.  
5. Use scaling to model multiplication and division.  
3. Explore reflections and lines of reflection.  
5. Explore arrangements of four straws using Math Masters page 437.  
6. Create frieze patterns.  
7. Explore tessellations.  
8. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | 1. Play Over And Up Squares.  
2. Refer to 5-Minute Math book for reinforcement activities.  
4. Create a paint reflection.  
5. Display pictures of symmetric objects.  
8. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Unit 12 Assessment  
Study Links  
Unit 12 Quiz  
Math Boxes |
### Learning Expectations & (Related Standard)
Students will be exposed to rates, ratios, and proportional thinking. (2.6.4)

### Content Outline (Unit/Time)
Unit 12 (3 wks)

### Activities / Instructional Strategies
5. Model the capacity of annual rice consumption using

### Enrichment Options
nts.htm

### Reinforcement Options
1. Estimate weights.
3. Play “What’s My Weight?”
6. Refer to 5-Minute Math book for reinforcement activities.
8. Visit Website: http://everydaymath.org/stude
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| 1. Find the median and mean of a data set on Math Masters page 340.  
2. Play “Credits/Debits”.  
5. Refer to 5-Minute Math booklet for reinforcement activities.  
6. Interpret the | Math Journal #2 page 305.  
6. Visit Website: [http://everydaymath.org/students.htm](http://everydaymath.org/students.htm) | Test products with | Reinforcement Options | Assessment Procedures |
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