

### Year at a Glance – 4th Grade

		Math Curriculum				Extensions	
6 weeks	Math Topics	TEK Objective		Concepts to Learn	Vocabulary		Projects
1	Place Value of whole numbers Addition and Subtraction of whole numbers Rounding whole numbers Multiplication and Division Fact Families Problem solving strategies	4.1A 4.3A 4.4B 4.4C 4.5A 4.6A 4.6B	4.7A 4.7B 4.14B 4.14C 4.15B	Place value of whole numbers through the millions period Expanded and standard forms of numbers Rounding whole numbers to the thousands place Adding and subtracting whole numbers Estimating sums and differences Properties of addition Properties of multiplication Multiplication facts (1-12) Fact families Problem solving in given situations involving pictures, numbers and word forms.	Period Standard form Expanded form Word form Millions Not equal to ( $\neq$ ) Fact families Inverse operations Round Pattern Multiply Estimate	dividend divisor addend quotient regroup Square number commutative property associative property Identity property zero property expression identity property variable distributive property equation ordered pair Sum Difference factor product Compatible numbers	Place value through the trillions period Ordered pair pictures
2	Patterns in Multiplication Estimation with products and quotients Models of arrays Multiplication facts Multiplication of 2 digits x 2 digits	4.1A 4.4A 4.4B 4.4C 4.4D 4.5A 4.5B 4.6B	4.14A 4.14B 4.14C 4.14D 4.15A	Use patterns to multiply by 10, 100 Use strategies including rounding and compatible numbers to estimate solution to multiplication and division problems. Use Multiplication to solve two –digits times two –digits without technology. Recall and apply multiplication facts through 12 x 12.	Partial products Continuous use and review of first six weeks vocabulary		Create word puzzles using 2 digit x 2 digit products
3	Identify points, lines and rays Classify angles Line relationships Identify polygons Classify triangles Classify quadrilaterals Parts of a circle Congruent figures Identify translations Identify lines of symmetry Identify tessellations Identify faces, edges, and vertices of solid figures Draw solid figures	4.8 A 4.8B 4.8C 4.9A 4.9B 4.9C 4.14A	4.14C 4.14D 4.15A 4.15B 4.16A 4.16B	Identify, describe, and draw points, lines, line segments, rays and planes. Identify and describe right, acute, and obtuse angles. Identify, describe, and draw intersecting, parallel, and perpendicular lines. Identify, classify, and describe polygons as regular and not regular. Classify triangles by the length of their sides and measure of their angles. Identify and classify quadrilaterals. Identify, classify, describe, and make prisms, pyramids, cubes, cylinders, cones, and spheres Describe and draw solid figures Identify solid figures by their nets. Identify, draw, and label parts of the circle. Identify congruent figures. Identify, predict, and describe the results of transformations (reflections, translations, and rotations). Identify lines of symmetry in geometric figures and use reflections to verify that a figure has symmetry. Identify and describe figures that tessellate. Solve problems using the strategy ACT IT OUT.	Review and continuous use of previous six weeks vocabulary. Point line segment endpoint line ray plane dimension One-dimensional two-dimensional angle vertex Degree( $^{\circ}$ ) acute angle right angle obtuse angle intersecting lines parallel lines perpendicular lines polygon triangle quadrilateral pentagon hexagon octagon decagon regular polygon equilateral triangle isosceles triangle scalene triangle right triangle acute triangle obtuse triangle parallelogram rhombus trapezoid circle center diameter radius chord compass Congruent transformation translation rotation reflection clockwise counterclockwise reflection line symmetry tessellation three dimensional triangular prism triangular pyramid face edge vertex base net		Make a tessellation. Make a collage of pictures that are in our world that are solid figures. Design a playground using 2 and 3 dimensional objects.

4	<p>Divide with remainders. Model 2-digit by 1-digit division. Compare different strategies to solve problems. Divide mentally Estimate quotients. Interpret the remainder Divide 3-digit numbers Zeros in Division Find the average. Read and write fractions Model equivalent fractions Compare fractions Order fractions Read and write mixed numbers Compare and order mixed numbers Relate fractions and decimals Equivalent decimals Relate Mixed Numbers and Decimals Fractions, decimals, and Money Compare Decimals Model addition and subtraction of decimals Add and subtract decimals</p>	<p>4.1A 4.1B 4.2B 4.2C 4.10 4.2D 4.13A 4.3A 4.14A 4.3B 4.14B 4.4B 4.14C 4.4C 4.14D 4.4D 4.15A 4.4E 4.15B 4.5A 4.15D 4.5B 4.16A 4.6A 4.16B</p>	<p>Divide whole numbers that do not divide evenly. Model division by using base-ten blocks. Divide 2-digit numbers by 1- digit numbers. Divide 3-digit numbers by 1-digit numbers. Divide 3-digit numbers by 1-digit numbers when there are zeros in the quotient. Interpret remainders. Use a basic fact and a pattern to divide mentally. Estimate quotients by using rounding and compatible numbers, and then find the quotient mentally. Find the average of a set of numbers. Read and write fractions Model equivalent fractions in simplest form Compare fractions with like and unlike denominators Order fractions. Read and write mixed numbers and express fractions greater than one as mixed numbers. Compare and order mixed numbers. Model, read and write fractions as decimals. Find equivalent decimals. Model, read, and write mixed numbers as decimals. Relate money amounts to fractions and decimals. Compare and order decimals. Model addition and subtraction of decimal numbers. Count, compare, order and make change with decimal money amounts. Add and subtract decimal amounts and money</p>	<p>Review and continuous use of previous six weeks vocabulary. Remainder Average Fraction Unit fraction Numerator Denominator Equivalent fractions Simplest form Mixed number Decimal Decimal point Equivalent decimals</p>	<p>Make up real life situations where division is used. Let the students design their own math word problem worksheet to be exchanged with another student. Create a make believe store where the students make calculations using money.</p>
5	<p>Measure time Elapsed time Sequence information Elapsed Time on a Calendar Temperature with Fahrenheit and Celsius Collect, sort, and organize data Choose a reasonable Scale Interpret bar graphs and double bar graphs Make Generalizations Graph ordered pairs Model combinations Tree diagrams Make an organized list</p>	<p>4.3A 4.14C 4.12A 4.14D 4.12B 4.13A 4.15A 4.13B 4.15B 4.14A 4.16A 4.14B 4.16B</p>	<p>Measure time to the nearest minute and second. Calculate elapsed time using clocks and stopwatches. Problem solving with skill sequences Find elapsed time on a calendar Measure temperature and changes in temperature in degrees Fahrenheit and Celsius. Collect and r\organize data by conducting a survey and using a frequency table. Interpret and construct Venn diagrams to sort and describe data. Make and interpret pictographs. Choose a reasonable scale and interval for a set of data. Read, make and interpret bar graphs and double bar graphs Describe the relationship between two sets of related data shown as ordered pairs. List all possible combinations of a set of data or objects. Determine all possible combinations of a given set of data. Use a tree diagram to determine all possible combinations of a set of data. Find all possible combinations of a given set of data.</p>	<p>Second Elapsed time Degrees Fahrenheit Celsius Survey Frequency Numerical data Categorical data Pictograph Key Scale Interval Bar graph Double-bar graph grid Grid Combination Tree diagram</p>	<p>Role play real life situations where lapsed time is involved. Make table and graphs based on surveys taken by the children on a topic of their choice. Locate ordered pairs that form a picture.</p>

6	<p>Measure Fractional parts  Change customary linear units  Weight  Capacity  Metric length  Mass  Capacity  Choose the Appropriate tool and unit of measure  Estimate with metrics.  Estimate and Measure perimeter  Find perimeter  Estimate and find Area  Perimeter and Area of Complex figures  Relate perimeter and area  Estimate and measure volume of prisms  Compare volumes of prisms  Relate volume and capacity</p>	<p>4.1A  4.1B  4.2C  4.3A  4.3B  4.4A  4.4B  4.4C  4.4D  4.4E  4.7A  4.11A  4.11C  4.11D  4.14A  4.14B  4.14C  4.14D  4.15A  4.15B  4.16A  4.16B</p>	<p>Estimate and measure length to the nearest whole, <math>1/2</math>, <math>1/4</math> and <math>1/8</math> of an inch  Change linear units by multiplying or dividing.  Estimate and measure the weight of objects and change units of weight.  Estimate and measure the capacity of containers and change units of capacity.  Change units of customary weight and capacity.  Estimate and measure metric length.  Estimate and measure the mass of objects.  Estimate and measure capacity of containers.  Choose the appropriate tool and unit of measure.  Make reasonable estimates for metric measurements.  Estimate and measure perimeter  Measure and find area by counting and using a formula.  Find the area and perimeter of complex figures.  Explore the relationship between are and perimeter.  Estimate and measure the volume of rectangular prisms.  Find volume of prisms.  Compare volume of prisms.  Relate volume and capacity of rectangular prisms.</p>	<p>Linear units  Inch(in)  Foot(ft)  Yard(yd)  Mile(mi)  Ounce(oz)  Pound(lb)  Ton (T)  Capacity,  Cup(c)  Pint(pt)  Quart(qt)  Gallon(gal)  Fluid ounce(fl oz)  Teaspoon(tsp)  Tablespoon(tbsp)  Millimeter(mm)  Centimeter(cm)  Decimeter(dm)  Meter(m)  Kilometer(km)  Mass  Gram(g)  Kilogram(kg)  Milliliter(mL)  Perimeter  Formula  Area  Square units  Volume  Cubic units</p>	<p>Play area  perimeter  blackout.  Build  rectangular  prisms out of  unifix cubes to  find the its  area,  perimeter and  volume.</p>
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