



	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Ratios & Proportional Relationships	Ratios, Proportions, & Percents -determine the ratio -equivalent ratios -proportions -percent of a number -compare percentages	Ratios, Proportions, & Percents -write a ratio to describe objects in a picture -ratio tables -equivalent ratios -proportions -unit rates -scale drawings -convert between percents, fractions, and decimals -compare percents and fractions -percents of numbers and money amounts -find what percent one number is of another	Ratios & Proportions -understand ratios -equivalent ratios -compare ratios -unit rates -solve proportions -estimate population size using proportion -rate of change -constant rate of change -scale drawings and scale factor Percents -convert between percents, fractions, and decimals -compare percents to fractions and decimals -estimate percents of numbers -percents of numbers and money amounts -percent of change	Ratios & Proportions -understand ratios -equivalent ratios -compare ratios -unit rates -do the ratios form a proportion -solve proportions -estimate population size using proportion -rate of change -constant rate of change -scale drawings and scale factor Proportional Relationships -identify proportional relationships -find the constant of variations -graph a proportional relationships -write an equation for proportional relationships Percents -convert between percents, fractions, and decimals -compare percents to fractions and decimals -find what percent one number is of another -estimate percent of numbers -percents of numbers and money amounts -percent of change



	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
The Number System	<p>Number Sense</p> <ul style="list-style-type: none"> - count within 1000 - skip-count by 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, and 10s - read and write numbers to 1000 using base-ten numerals, number names, and expanded form -Roman Numerals: I-X, L, C, D, M <p>Place Value</p> <ul style="list-style-type: none"> -convert between place values -compare numbers up to billions -word names for numbers -rounding -understanding integers -put integers in order -simple scientific notation <p>Addition & Subtraction</p> <ul style="list-style-type: none"> -add and subtract whole numbers up to billions -add and subtract money amounts -choose numbers with a particular sum or difference -properties of addition -inequalities with addition and subtraction on a number line -estimate sums and differences -add decimals -subtract decimals 	<p>Number Theory</p> <ul style="list-style-type: none"> -convert between standard and scientific notation -compare numbers written in scientific notation -prime and composite numbers -identify factors -prime factorization -greatest common factor -least common multiple <p>Whole Numbers</p> <ul style="list-style-type: none"> -place values in whole numbers -word names for numbers -Roman numerals <p>Decimals</p> <ul style="list-style-type: none"> -decimals place values -word names for decimal numbers -convert decimals to mixed numbers -put decimal numbers in order -inequalities with decimals -round decimals -round whole numbers and decimals -decimals number lines -multiply decimals -divide decimals by whole numbers -add and subtract decimals <p>Integers</p> <ul style="list-style-type: none"> -understand integers -absolute value -number lines with integers -compare and order integers -add and subtract integers 	<p>Number Theory</p> <ul style="list-style-type: none"> -prime or composite -prime factorization -multiplicative inverses -divisibility rules -greatest common factor -least common multiple -scientific notation -classify numbers <p>Decimals</p> <ul style="list-style-type: none"> -compare and order decimals -decimal number lines -round decimals -add/subtract decimals -multiply decimals -divide decimals -estimate sums, differences, and products of decimals -multistep inequalities with decimals -maps with decimal distances <p>Integers</p> <ul style="list-style-type: none"> -understand integers -integers on number lines -absolute value and opposite integers -compare and order integers -integer inequalities with absolute values -add/subtract integers -multiply/divide integers -simplify expressions involving integers 	<p>Number Theory</p> <ul style="list-style-type: none"> -factors -divisibility rules -prime or composite -prime factorization -greatest common factor -least common multiple -classify numbers <p>Integers</p> <ul style="list-style-type: none"> -understand integers -integers on number lines -absolute value and opposite integers -compare and order integers -integer inequalities with absolute values -add/subtract integers -multiply/divide integers -simplify expressions involving integers -evaluate variable expressions with integers and absolute value <p>Exponents and Square Roots</p> <ul style="list-style-type: none"> -evaluate exponents -solve for the variable -exponents with decimal and fractional bases -negative exponents -simplify expressions involving exponents -multiplication with exponents -division with exponents -power rule -square root of perfect squares -estimate square roots -positive and negative square roots -cube roots of perfect cubes



	<p>Multiplication</p> <ul style="list-style-type: none"> -multiply 1-digit numbers -multiplication patterns over increasing place values -multiply numbers ending in zeroes -properties of multiplication -choose numbers with a particular product -estimate products -multiply 2-digit numbers by 2-digit numbers -multiply 2-digit numbers by 3-digit numbers -multiply three or more numbers up to 2-digits each -multiply three numbers up to 3 digits each -multiplication input/output tables -input/output tables: find the rule <p>Division</p> <ul style="list-style-type: none"> -facts to 12 -divide multi-digit numbers by 1-digit -divide by 1-digit numbers with remainders -estimate quotient -division patterns over increasing place values -divide numbers ending in zeroes -divide 2-digit and 3-digit numbers by 2-digits -divide larger numbers by 	<p>Rational Numbers</p> <ul style="list-style-type: none"> -compare rational numbers -put rational numbers in order -absolute value of rational numbers -add and subtract rational numbers -multiply and divide rational numbers <p>Exponents & Square Roots</p> <ul style="list-style-type: none"> -write multiplication expressions using exponents -evaluate exponents -exponents with decimal bases -exponents with fractional bases -understanding negative exponents -square roots of perfect squares -estimate square roots <p>Multiplication & Division</p> <ul style="list-style-type: none"> -multiply multi-digit whole numbers with three or more digits -properties of multiplication -integer multiplication rules -divisibility rules -division patterns with zeros -divide whole numbers: 2-digit divisors -divide whole numbers: 3-digit divisors -integer division rules 	<p>Exponents and Square Roots</p> <ul style="list-style-type: none"> -evaluate exponents -solve for the variable -exponents with decimal and fractional bases -negative exponents -simplify expressions involving exponents -square root of perfect squares -estimate square roots 	<p>Scientific Notation</p> <ul style="list-style-type: none"> -convert between standard and scientific notation -compare numbers written in scientific notation -multiply numbers written in scientific notation -divide numbers written in scientific notation
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	<p>2-digits -divide money amounts -choose numbers with a particular quotient</p> <p>Number Theory -prime and composite numbers -prime factorization -prime factorization with exponents -divisibility rules -greatest common factor -least common multiple</p>			
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Numbers & Operations: Fractions	<p>Fractions & Mixed Numbers</p> <ul style="list-style-type: none"> -equivalent fractions -reduce fractions to lowest terms -convert between improper fractions and mixed numbers -least common denominator -graph and compare fractions on number lines -compare fractions and mixed numbers -put fractions in order -round mixed numbers -reciprocals <p>Add & Subtract Fractions</p> <ul style="list-style-type: none"> -decompose fractions multiple ways -add and subtract fractions with like denominators using number lines -add and subtract mixed numbers with like denominators -add and subtract fractions with unlike denominators -add up to 4 fractions with denominators of 10 and 100 -add 3 or more fractions with unlike denominators -compare sums and differences of fractions -add/subtract mixed numbers with unlike denominators 	<p>Fractions & Mixed Numbers</p> <ul style="list-style-type: none"> - equivalent fractions -simplify fractions -least common denominator -compare fractions with like and unlike denominators -convert between improper fractions and mixed numbers -convert between decimals and fractions or mixed numbers -put a mix a decimals, fractions, and mixed numbers in order <p>Add & Subtract Fractions</p> <ul style="list-style-type: none"> -add/subtract fractions with like denominators -add/subtract fractions with unlike denominators -inequalities with addition and subtraction of like and unlike fractions mixed numbers -maps with fractional distances <p>Multiply Fractions</p> <ul style="list-style-type: none"> -multiply fractions of whole numbers -estimate products of fractions and whole numbers -multiply two fractions -multiply three or more fractions and whole numbers -multiply mixed numbers and whole numbers -multiply three or more mixed numbers, fractions, and/or whole numbers <p>Divide Fractions</p> <ul style="list-style-type: none"> -reciprocals -divide fractions by whole numbers -estimate quotients 	<p>Fractions & Mixed Numbers</p> <ul style="list-style-type: none"> - equivalent fractions -simplify fractions -least common denominator -compare and order fractions -convert between mixed numbers and improper fractions -round mixed numbers <p>Add & Subtract Fractions</p> <ul style="list-style-type: none"> -add/subtract fractions -add/subtract mixed numbers -inequalities with addition and subtraction of fractions and mixed numbers -estimate sums of differences of mixed numbers -multiply fractions -divide fractions -maps with fractional distances 	<p>Fractions & Mixed Numbers</p> <ul style="list-style-type: none"> - equivalent fractions -simplify fractions -least common denominator -compare and order fractions -convert between mixed numbers and improper fractions -round mixed numbers <p>Add & Subtract Fractions</p> <ul style="list-style-type: none"> -add/subtract fractions -add/subtract mixed numbers -inequalities with addition and subtraction of fractions and mixed numbers -estimate sums of differences of mixed numbers -multiply fractions -divide fractions -maps with fractional distances



	<p>-add/subtract fraction in recipes</p> <p>Multiply Fractions</p> <ul style="list-style-type: none">-multiply fractions by whole numbers-multiply two fractions-multiply three or more fractions-multiply a mixed number by a whole number-multiply two mixed numbers <p>Divide Fractions</p> <ul style="list-style-type: none">-divide fractions by whole numbers-divide whole numbers by fractions-divide two fractions-divide fractions by mixed numbers <p>Decimals</p> <ul style="list-style-type: none">-understand decimals expressed in words-place values in decimals-convert decimals between standard and expanded form-equivalent decimals-decimals lines-compare decimals on number lines-order decimals-convert fractions to decimals-convert decimals to fractions-convert decimals between standard and expanded	<p>-divide fractions with mixed numbers</p> <p>-simplify expressions involving fractions</p>		
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Curriculum Goals
Upper School Math

	<p>form using fractions -compare decimals and fractions on number lines -repeating decimals -put assorted decimals, fractions, and mixed numbers in order -add/subtract decimals -estimate products of decimals -multiply decimals by a power of ten -multiply a decimal by a one-digit number -multiply money amounts -multiply three or more numbers, one of which is a decimal -multiply two decimals -divide by powers of ten</p>			
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Measurement & Data	<p>Measurement</p> <ul style="list-style-type: none"> -choose appropriate customary unit of measurement -compare and convert customary units of length, weight, and volume -choose appropriate metric unit of measurement -compare and convert metric units of length, weight, and volume -compare customary units by multiplying -convert customary units involving fractions -convert mixed customary units -add and subtract customary units -convert between customary and metric units -temperature: Celsius and Fahrenheit <p>Consumer Math</p> <ul style="list-style-type: none"> -price lists -unit prices -sale price <p>Time</p> <ul style="list-style-type: none"> -convert time units -add and subtract mixed time units -time zones -elapsed time -find start and end times -schedules and time lines -time patters 	<p>Measurement</p> <ul style="list-style-type: none"> -estimate customary measurements -convert and compare customary measurements -convert, compare, add, and subtract mixed customary units -multiply and divide mixed customary units -convert and compare metric units -convert between customary and metric units -temperatures above and below zero -convert between Celsius and Fahrenheit <p>Data & Graphs</p> <ul style="list-style-type: none"> -interpret/create pictographs -stem-and-leaf plots -interpret/create line plots -create frequency tables -interpret/create bar graphs -create frequency tables -interpret / create double bar graphs -create histograms -interpret/create double line graphs -interpret box-and-whisker plots -choose the best type of graph <p>Time</p> <ul style="list-style-type: none"> -elapsed time -time units -find start and end times 	<p>Measurement</p> <ul style="list-style-type: none"> -estimate customary measurement s -estimate metric measurements -compare and convert customary units -compare and convert metric units -convert between customary and metric systems -precision -Celsius and Fahrenheit temperatures <p>Data & Graphs</p> <ul style="list-style-type: none"> -interpret/create tables -interpret/create stem-and-leaf plots -interpret/create line plots -create frequency tables -interpret/create bar graphs -create frequency tables -interpret / create double bar graphs -create histograms -interpret/create double line graphs -interpret box-and-whisker plots -interpret/create circle graphs -interpret/create scatter plots -choose the best type of graph 	<p>Measurement</p> <ul style="list-style-type: none"> -compare and convert customary units -compare and convert metric units -convert between customary and metric systems -precision -convert between Celsius and Fahrenheit temperatures <p>Data & Graphs</p> <ul style="list-style-type: none"> -interpret/create tables -interpret/create stem-and-leaf plots -interpret/create line plots -create frequency tables -interpret/create bar graphs -create frequency tables -interpret / create double bar graphs -create histograms -interpret/create double line graphs -interpret box-and-whisker plots -interpret/create circle graphs -interpret/create scatter plots -choose the best type of graph <p>Consumer Math</p> <ul style="list-style-type: none"> -add, subtract, multiply, and divide money amounts -price lists -unit prices -percents of a number: tax, discount, and more -sale price: find the original price -estimate tips -simple interest -compound interest



	<p>Data & Graphs</p> <ul style="list-style-type: none"> -read a table -interpret/create line graphs -interpret/create bar graphs -interpret/create pictographs -interpret/create histograms -interpret/create line plots -frequency charts -stem-and-leaf plots -circle graphs -choose the best type of graph 	<p>Consumer Math</p> <ul style="list-style-type: none"> -which is the better coupon? -unit prices: which is the better buy? -unit prices with fractions and decimals -unit prices with customary unit conversions -sale prices -sale prices: find the original price -percents- calculate tax, tip, mark-up, and more <p>Statistics</p> <ul style="list-style-type: none"> -calculate mean, median, mode, and range -interpret charts to find mean, median, mode, and range -identify representative, random, and biased samples <p>Probability</p> <ul style="list-style-type: none"> -combinations -probability of one event -make predictions -probability of opposite, mutually exclusive, and overlapping events -compound events -probability of dependent and independent events -factorials -permutations 	<p>Consumer Math</p> <ul style="list-style-type: none"> -add, subtract, multiply, and divide money amounts -price lists -unit prices -percents of a number: tax, discount, and more -sale price: find the original price -estimate tips -simple interest -compound interest <p>Statistics</p> <ul style="list-style-type: none"> -calculate mean, median, mode, and range -interpret charts to find mean, median, mode, and range -changes in mean, median, mode, and range -identify representative, random, and biased samples <p>Probability</p> <ul style="list-style-type: none"> -probability of simple events -probability of opposite, mutually exclusive, and overlapping events -experimental probability -make predictions -compound events: find the number of outcomes -identify independent and dependent events -probability of independent and dependent events -factorials -permutations -counting principle 	<p>Statistics</p> <ul style="list-style-type: none"> -calculate mean, median, mode, and range -interpret charts to find mean, median, mode, and range -changes in mean, median, mode, and range -quartiles -identify representative, random, and biased samples <p>Probability</p> <ul style="list-style-type: none"> -probability of simple events -probability of opposite, mutually exclusive, and overlapping events -experimental probability -make predictions -compound events: find the number of outcomes -identify independent and dependent events -probability of independent and dependent events -factorials -permutations -counting principle -combination and permutation notation
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Geometry	<p>Geometry</p> <ul style="list-style-type: none"> - identify 2-dimensional and 3-dimensional shapes - types of triangles - open and closed shapes and qualities of polygons - regular and irregular polygons - number of sides in polygons - which figure is being described? - classify quadrilaterals - reflection, rotation, and translation - similar and congruent - nets of 3-dimensional figures - types of angles - measure angles with protractors - parts of a circle - perimeter - area of squares and rectangles - area of triangles - area of parallelograms and trapezoids - area of compound figures - area between two rectangles - area of perimeter and irregular figures - volume of rectangular prisms made with unit cubes - volume of irregular figures made with unit cubes - volume of cubes 	<p>Geometry</p> <ul style="list-style-type: none"> - lines, line segments, and rays - estimate angle measurement - name angles - complementary and supplementary angles - transversal of parallel lines - triangle review - classify quadrilaterals - find missing angle length in triangles and quadrilaterals - sums of angles in polygons - parts of a circle - central angles of circles - similar and congruent figures - find side length of similar figures - reflection, rotation, and translation - translation, reflection, rotation: graph the image - symmetry - find lengths and measures of bisected lines and angles - area of compound figures - area between two rectangles - circles: calculate area, circumference, radius, and diameter - identify polyhedra and count faces, edges, and vertices - front, side, and top view - nets of 3-dimensional figures - volume of cubes and rectangular prisms - surface area of cubes and rectangular prisms - volume and surface area of triangular prisms - volume and surface area of cylinders - semicircles: calculate area, perimeter, radius, and diameter - quarter circle: calculate area, perimeter, radius, and diameter 	<p>Geometry</p> <ul style="list-style-type: none"> - lines, line segments, and rays - parallel, perpendicular, intersecting - name, measure, and classify angles - identify/measure complementary, supplementary, vertical, adjacent, and congruent angles - transversal of parallel lines - classify triangles - classify quadrilaterals - find missing angles of quadrilaterals - identify and classify polygons - interior angles of polygons - similar and congruent figures - find side length of similar and congruent figures - perimeter - area of triangles and trapezoids - parts of a circle - circles: calculate area, circumference, radius, and diameter - front, side, top view - area between two rectangles - identify polyhedra and count faces, edges, and vertices - front, side, and top view - nets of 3-dimensional figures - volume of cubes and rectangular prisms - surface area - perimeter, area, and volume: change in scale - semicircles: calculate area, perimeter, radius, and diameter - quarter circle: calculate area, perimeter, radius, and diameter - area of compound figures with triangles, semicircles, and quarter circles 	<p>Geometry</p> <ul style="list-style-type: none"> - identify and measure complementary, supplementary, vertical, adjacent, and congruent angles - transversal of parallel lines - classify triangles - classify quadrilaterals - find missing angles of quadrilaterals - identify and classify polygons - interior angles of polygons - similar and congruent figures - find side length of similar and congruent figures - congruent triangles: SSS, SAS, and ASA - perimeter - area - parts of a circle - circles, semicircles, and quarter circles - front, side, top view - area between two rectangles - identify polyhedra and count faces, edges, and vertices - front, side, and top view - nets of 3-dimensional figures - volume of cubes and rectangular prisms - surface area of prisms, cylinders, pyramids, and cones - volume of prisms, cylinders, pyramids, and cones - volume and surface area of similar solids - perimeter, area, and volume: changes in scale <p>Transformations</p> <ul style="list-style-type: none"> - identify reflections, rotations, and translations - graph images and find coordinates - symmetry



	<ul style="list-style-type: none">-surface area-three-dimensional figures viewed from different perspectives-lines of symmetry-rotational symmetry-lines, line segments, and rays-parallel, perpendicular, intersecting lines-radius, diameter, circumference, and area of a circle-find the unknown angle in triangles and quadrilaterals		<p>Transformations</p> <ul style="list-style-type: none">-identify reflections, rotations, and translations-graph images and find coordinates-symmetry <p>Pythagorean Theorem</p> <ul style="list-style-type: none">-find the length of the hypotenuse-find the missing length	<p>Pythagorean Theorem</p> <ul style="list-style-type: none">-find the length of the hypotenuse-find the missing length-converse of Pythagorean theorem: is it a right triangle?
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Algebra	<p>Variables</p> <ul style="list-style-type: none"> -simplify expressions using order of operations and parentheses -write/evaluate variable expressions -write equations to represent word problems -function tables -convert graphs to input/output tables -write/graph linear functions <p>Coordinate Graphs</p> <ul style="list-style-type: none"> -coordinate graphs with decimals and negative numbers -graph points on a coordinate plane -quadrants <p>Probability & Statistics</p> <ul style="list-style-type: none"> -calculate mean, median, mode, and range -interpret charts -calculate probability -make predictions 	<p>Variable Expressions</p> <ul style="list-style-type: none"> -write variable expressions to represent word problems -evaluate variable expressions with whole numbers -evaluate variable expressions involving decimals, fractions, and mixed numbers -does x satisfy the equation? -solve one-step equations with whole numbers, decimals, fractions, and mixed numbers -evaluate multi-variable expressions -solve two-step equations -does (x,y) satisfy an equation? -identify terms, coefficients, and monomials -add and subtract like terms -simplify variable expressions using properties -distributive property -solve equations with like terms -half-life and population doubling -inequalities on number lines -solve one-step linear inequalities <p>Coordinate Graph</p> <ul style="list-style-type: none"> -graph points on a coordinate plane -coordinate graphs as maps -distance between two points -find points on a function graph -write the linear function shown in a graph -graph linear functions -relative coordinates -identify linear and nonlinear functions 	<p>Variable Expressions</p> <ul style="list-style-type: none"> -write variable expressions -evaluate single-variable expressions -evaluate multi-variable expressions -evaluate expressions for numerators and denominators -add/subtract like terms <p>Single-variable Equations</p> <ul style="list-style-type: none"> -does x satisfy the equation? -model and solve equations using algebra tiles -solve one-step linear equations -solve two-step linear equations -solve equations involving like terms <p>Inequalities</p> <ul style="list-style-type: none"> -on number lines -solutions to variable inequalities -graph inequalities on number lines -solve one-step linear inequalities -graph solutions to one-step linear inequalities 	<p>Variable Expressions</p> <ul style="list-style-type: none"> -write variable expressions to represent diagrams -identify terms and coefficients -evaluate single-variable expressions -evaluate multi-variable expressions -add/subtract like terms -simplify variable expressions <p>Single-variable Equations</p> <ul style="list-style-type: none"> -does x satisfy the equation? -model and solve equations using algebra tiles -solve one-step linear equations -solve two-step linear equations -solve multi-step equations -identities and equations with no solutions <p>Inequalities</p> <ul style="list-style-type: none"> -on number lines -solutions to variable inequalities -graph inequalities on number lines -solve one-step linear inequalities -graph solutions to one-step linear inequalities -solve two-step linear inequalities -graph solutions to two-step linear inequalities -solve advanced linear inequalities -graph solutions to advanced linear equations <p>Linear Functions</p> <ul style="list-style-type: none"> -does (x,y) satisfy the equation? -evaluate a function -complete a function table -write a rule for a function table -find points on a function graph -graph a line from an equation -linear function word problems -find the slope of a graph -find the slope from two points



			<p>Linear Functions</p> <ul style="list-style-type: none"> -identify proportional relationships -find constant of variation -does (x,y) satisfy the equation? -evaluate a function -complete a function table -write a rule for a function table -find points on a function graph -graph a line from an equation -linear function word problems -find the slope of a graph -find the slope from two points -find the slope from an equation -graph a line using slope -identify linear and nonlinear functions <p>Coordinate Graphs</p> <ul style="list-style-type: none"> -points on coordinate graphs -quadrants and axes -coordinate graphs as maps 	<ul style="list-style-type: none"> -find the slope from an equation -graph a line using slope -slopes of parallel and perpendicular lines <p>Nonlinear Functions</p> <ul style="list-style-type: none"> -identify linear and nonlinear functions -Does (x,y) satisfy a nonlinear equation? -evaluate a nonlinear function <p>Coordinate Graphs</p> <ul style="list-style-type: none"> -points on coordinate graphs -quadrants and axes -coordinate graphs as maps -distance between two points <p>System of Linear Equations</p> <ul style="list-style-type: none"> -is (x,y) a solution to the system of equations? -solve a system of equations by graphing -find the number of solutions to a system of equations by graphing -classify a system of equations -solve a system of equations -solve a system of equations using elimination <p>Monomials and Polynomials</p> <ul style="list-style-type: none"> -identify monomials -model polynomials with algebra tiles -add/subtract polynomials -multiply/divide polynomials -powers of monomials -square and cube roots of monomials -multiply polynomials using algebra tiles -multiply polynomials -multiply polynomials to find area
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	4 th Grade	5 th Grade	6 th Grade	7 th /8 th Grade
Writing	<p>Opinion Pieces</p> <ul style="list-style-type: none"> -provide reasons that are supported by facts and details -use linking words and phrases -conclusion related to opinion <p>Explanatory/ Informative Texts</p> <ul style="list-style-type: none"> -introduce topic and group related information into sections with headings, include illustrations -include facts, definitions, concrete details, and quotations -use linking words and phrases -conclusion section related to explanation presented 	<p>Opinion Pieces</p> <ul style="list-style-type: none"> -provide logically groups that are supported by facts and details -link opinions and reasons using words, phrases, and clauses (e.g., consequently, specifically) -conclusion related to opinion <p>Explanatory/ Informative Texts</p> <ul style="list-style-type: none"> -introduce topic, including general observation and focus, and group related information into sections with headings, include illustrations -include facts, definitions, concrete details, and quotations -link ideas within and across categories of information -conclusion section related to explanation presented 	<p>Argument</p> <ul style="list-style-type: none"> -introduce claims -support claims with clear reasons and evidence, using credible sources -clarify relationships among claims and reasons -conclusion section <p>Explanatory/ Informative Texts</p> <ul style="list-style-type: none"> -introduce topic, using strategies like compare/contrast or cause/effect, and group related information into sections with headings, include illustrations -include facts, definitions, concrete details, and quotations -use transitions to clarify ideas -conclusion section related to explanation presented 	<p>Argument</p> <ul style="list-style-type: none"> -introduce claims and acknowledge alternate claims -support claims with clear reasons and evidence, using credible sources -clarify relationships among claims and reasons -conclusion section <p>Explanatory/ Informative Texts</p> <ul style="list-style-type: none"> -introduce topic, preview what is to follow, and group related information into sections with headings, include illustrations -include facts, definitions, concrete



	<p>Narratives -introduce narrator and/or characters -use dialogue and description of actions -use a variety of transitional words and phrases to manage sequence of events -use sensory details to convey experiences -conclusion</p> <p>Research Projects -based on focused questions -investigate different aspects of a topic</p>	<p>Narratives -introduce narrator and/or characters -use dialogue and description of actions, show the responses of characters to situations -use a variety of transitional words and phrases to manage sequence of events -use sensory details to convey experiences -conclusion</p> <p>Research Projects -based on focused questions -investigate different aspects of a topic -use several sources</p>	<p>Narratives -introduce narrator and/or characters -use dialogue and description of actions, show the responses of characters to situations, signal shifts from one time frame or setting to another -use a variety of transitional words and phrases to manage sequence of events -use sensory details to convey experiences -conclusion</p> <p>Research Projects -based on focused questions -investigate different aspects of a topic -use several sources</p>	<p>Narratives -establish a context and point of view -introduce narrator and/or characters -use dialogue and description of actions, show the responses of characters to situations, signal shifts from one time frame or setting to another, show the relationships among experiences and events -use a variety of transitional words and phrases to manage sequence of events -use sensory details to convey experiences -conclusion reflects on the narrated experiences or event.</p> <p>Research Projects -based on focused (self-generated) questions -investigate different aspects of a topic -use several sources</p>
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Curriculum Goals
Upper School Language Arts

	4 th Grade	5 th Grade	6 th Grade	7 th /8 th Grade
Language	<ul style="list-style-type: none"> -relative pronouns (who, whose, whom) and relative adverbs (where, when, why) -progressive verb tenses -auxiliaries (can, may, must) -prepositional phrases -complete sentences, recognizing fragments and run-ons -frequently confused words (to, too, there, their) 	<ul style="list-style-type: none"> -conjunctions, preposition, and interjections and their function in particular sentences -perfect verb tenses (I had walked.) -use verb tense to convey various times, sequences, states, and conditions -recognize shifts in verb tense -correlative conjunctions 	<ul style="list-style-type: none"> -pronouns in the proper case (subjective, objective, possessive) -intensive pronouns (myself, ourselves) -editing own and others work 	<ul style="list-style-type: none"> -phrases and clauses -choose between simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas -indicative, imperative, interrogative, conditional, and subjective mood
Conventions	<ul style="list-style-type: none"> -capitalization -commas in addresses -commas and quotation in dialogue -possessives -suffixes 	<ul style="list-style-type: none"> -commas and quotation marks to direct speech and quotations in text -comma before coordinating conjunction in a compound sentence 	<ul style="list-style-type: none"> -punctuation to separate items in a series -comma to separate an introductory element from the rest of the sentence -comma to set off the words yes and no, to set off a tag question, and to indicate direct address -underlining, quotation marks, or italics for titles 	<ul style="list-style-type: none"> -punctuation (comma, ellipsis, dash) to indicate a pause or break -use an ellipsis to indicate omission -punctuation to set off nonrestrictive elements



introductory

	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
Science	<p>Organization of Living Things</p> <ul style="list-style-type: none"> -describe how all living things are made of cells -describe how living things use energy to carry out life processes -describe the functions of the digestive, respiratory, and skeletal systems -describe the life cycles of organisms -describe how organisms respond to their environment <p>Ecosystems</p> <ul style="list-style-type: none"> - tell how nonliving parts of an ecosystem help living things meet their needs -describe how energy in an ecosystem flows from the Sun to producers, and then from producers to consumers -explain the importance of scavengers and decomposers -tell how organisms adapt to their environments in order to survive 	<p>The Life Processes</p> <ul style="list-style-type: none"> -tell how cells are the basic structural and functional unit of all living things -tell how cell characteristics are used to classify living things -explain the difference between single celled and multi-celled organisms -explain the process of photosynthesis -explain the role that plants have in the carbon and oxygen cycles -classify plants into three main groups -tell how all living things inherit characteristics from their parents -describe how genetic information is stored in DNA -tell how species evolve <p>Ecosystems, Communities, & Biomes</p> <ul style="list-style-type: none"> -describe how communities consist of populations of organisms that interact with each other -tell that Biomes are regions with characteristic climate -describe the life in an ecosystem 	<p>Continuity of Life</p> <ul style="list-style-type: none"> -tell how scientists classify organisms -describe the six kingdoms -explain how cells convert food into energy -tell how new cells are formed -explain how cells reproduce by mitosis or meiosis -describe how genes are made of two alleles -describe how traits can be dominant or recessive -explain how natural selection occurs <p>The Changing Environment</p> <ul style="list-style-type: none"> -explain how energy moves in one direction through ecosystems -tell how living things use water and nitrogen -explain how oxygen and carbon dioxide cycle between organisms and the environment through the process of photosynthesis and respiration -explain how in an ecosystem, all living and nonliving factors interact -describe food webs -explain how competition, 	<p>Motion & Energy</p> <ul style="list-style-type: none"> -position and motion -speed and velocity -acceleration -gravity and friction -Newton's First Law -Newton's Second Law -Newton's Third Law -types of energy -energy transformations and work -machines -sound -light -mirrors, lenses, and the eye <p>Interactions of Matter</p> <ul style="list-style-type: none"> -matter -changes in state -the behavior of gases -thermal energy -understanding the atom -discovering parts of an atom -protons, neutrons, and electrons -elements and chemical bonds -chemical reactions and equations -mixtures, solubility, acid/base solutions <p>Understanding the Universe</p> <ul style="list-style-type: none"> -the structure of the solar system -the inner planets -the outer planets -dwarf planets and other objects -the view from Earth -the Sun and other stars



<p>The Solid Earth -name the three kinds of rock in Earth's crust -describe the rapid changes of the Earth's surface -describe the impact of weathering, deposition, and mountain building -describe how some natural resources can be replaced and some cannot -tell ways that people can protect the environment</p> <p>The Atmosphere & Beyond -explain how gases in the Earth's atmosphere support life and keep Earth warm -describe how the water cycles caused weather -tell what meteorologists do -explain the role of the Sun's energy and gravity -explain the difference between the outer and inner planets -explain how the motions of the Earth and the Moon cause changes in seasons and phases of the moon -tell how stars can be classified</p> <p>The Nature of Matter -tell how all matter has mass, takes up space, and is made of tiny particles</p>	<p>Earth System -describe the features that form Earth's solid surface -tell how Earth's land features are shaped by destructive forces -name the four layers of the Earth -explain how to use Earth's resources wisely</p> <p>Atmosphere & Solar System -describe climate as average temperature and average precipitation -describe the three major climate zones -describe the layers of the Earth's atmosphere -tell how Earth's seasons are formed -tell how the Moon appears to change shape -tell about the life cycles of stars -define a galaxy</p> <p>Kinds of Matter -explain that the atom is the basic unit of matter -describe how the elements are classified in the Periodic Table -explain how compounds are substances made of at least two elements -describe how chemical changes occur -describe the difference between mixtures and substances -describe how matter can change form</p>	<p>disease, and invasive species can limit population -tell how biodiversity is a measure of the number of species in an ecosystem</p> <p>The Dynamic Earth -describe hardness as a property that is used to identify minerals -explain how rocks are made up of one or more minerals -explain how sedimentary rocks form layers that contain fossils and clues to Earth's history -describe the plate movements and their impacts -tell how fossil fuels are formed -explain the impact of burning fossil fuels -describe alternate energy sources</p> <p>Earth in the Universe -tell how jet streams and ocean currents affect global weather patterns -tell how meteorologists use weather data to track storms -explain how the greenhouse effect occurs -tell how ocean tides are caused by the Moon's gravity -tell how all bodies in the solar system are held in elliptical orbit by the Sun's gravity -compare the characteristics</p>	<p>-evolution of stars -galaxies and the universe -stars and galaxies</p> <p>Earth & Geologic Changes -definition of minerals -characteristics of minerals -identifying minerals -rock classification -rocks and resources -understanding the rock cycle -processes of the rock cycle -the continental drift hypothesis -development of a theory -the theory of plate tectonics -earthquakes -volcanoes -fossils -relative-age dating -absolute-age dating -geologic history and the evolution of life -the Paleozoic era -the Mesozoic era -the Cenozoic era</p> <p>Exploring Ecology -land biomes -aquatic ecosystems -how ecosystems change -ecosystems -energy and matter -human and ecosystems -people and the environment -impacts on the land -impacts on water -impacts on the atmosphere</p>
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	<ul style="list-style-type: none"> -use the metric system to measure mass and volume -describe matter by its physical and chemical properties -describe how matter changes <p>Energy & Motion</p> <ul style="list-style-type: none"> -tell how energy changes form, and can be stored and released -explain how object reflect, refract, and absorb light -describe how vibrating objects produce sound waves with different properties -explain how energy of particles in matter can be measured and transferred -explain the electric charges that attract or repel -explain how electricity can produce magnetisms, and vice versa -tell how speed and direction describe how an object's position changes compared to objects around it 	<p>Forms of Energy</p> <ul style="list-style-type: none"> -describe the functions of forces, motion, and work -tell how energy can be changes in for different forms but cannot be created or destroyed -describe how sound and light waves carry energy -explain temperature as the average kinetic energy of the particles in a substance -explain heat as the transfer of thermal energy -describe how materials can facilitate heat transfer -explain static electricity -use electrical circuits to provide paths for electrons to travel 	<p>of the inner and outer planets</p> <p>Matter & Its Properties</p> <ul style="list-style-type: none"> -describe atoms as consisting of a nucleus of protons and neutrons surrounded by electrons -describe acids and bases as two groups of compounds that are measured by the pH scale describe the difference between compounds and solutions -explain how chemical reactions rearrange bonds among atoms, forming new molecules -tell how matter cannot be created or destroyed <p>Energy, Forces, & Motion</p> <ul style="list-style-type: none"> -tell how energy cannot be created or destroyed, but can be transferred -describe how mechanical waves must travel through a medium, but electromagnetic waves can travel through a vacuum -observe how visible light makes up a small fraction of the electromagnetic spectrum -classify materials as transparent, translucent, or opaque -describe color as how light interacts with matter 	<p>Heredity and Human Body Systems</p> <ul style="list-style-type: none"> -interactions of human body systems -heredity and how traits change
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
History	<p>Local Communities -Students will create a local narrative about the history of Portland. Describe local community life long ago, including jobs, schooling, transportation, and recreation. Students will explore local architecture (bridges) and compare changes in function and appearance over time. Understand how communities in North America varied long ago.</p> <p>Local History -Students understand the various groups from regions throughout the world who came into Oregon or the region over long ago and recent past. Students will understand the interactions among all these groups throughout the history of Oregon. Understand the ideas that were significant in the development of Oregon that helped forge its unique identity.</p> <p>The History of the United States Students understand events and exemplify fundamental values and principles of American</p>	<p>Expansion (1754-1820s) -Understand the international background and consequences of the Louisiana Purchase, the War of 1812, and the Monroe Doctrine. Students understand federal and state Indian policy and the strategies for survival by Native Americans. Understand the ideology of Manifest Destiny, the nation's expansion to the Northwest, and the Mexican-American War. Understand the branches of government and judicial system.</p> <p>Colonization & Settlement (1585-1763) -Explore why the Americas attracted Europeans, why they brought enslaved Africans to their colonies, and how Europeans struggles for control of North America and the Caribbean. Analyze hoe political, religious, and social institutions emerged in the English colonies. Understand the values and institutions of European economic life that took root in the colonies, and how slavery reshapes European and African life in the Americas.</p> <p>Three Worlds Meet (Beginnings to 1620) -Students compare characteristics of societies in the Americas, Western Europe, and Western</p>	<p>Expansion & Reform (1801-1861) -Students explore how the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement changed the lives of Americans and led toward regional tensions. Examine the extension, restriction, and reorganization of political democracy after 1800. Describe the sources and character of cultural, religious, and social reform movements in the antebellum period.</p> <p>Civil War & Reconstruction (1850-1877) -Students understand the causes of the Civil War and examine the course and character of the Civil War and its effects on the American people. They examine how various reconstruction plans succeeded or failed. Students analyze the effectiveness of the Civil War based on current social conditions.</p> <p>The Emergence of the First Global Age (1450 - 1770) -Students can explain how the transoceanic interlinking of all major regions of the world form 1450 to 1600 led</p>	<p>The Development of the Industrial United States (1870 - 1900) -Students can explain how the rise of corporations, heavy industry, and mechanized farming transformed the American people. Explore massive immigration after 1870 and how new social patterns, conflicts, and ideas of national unity developed amid growing cultural diversity. Examine Federal Indian policy and United States foreign policy after the Civil War. Students analyze a resemblance to possibilities and problems that our society faces today.</p> <p>The Emergence of Modern America (1890-1930) -Students examine how Progressives and others addressed problems of industrial capitalism, urbanization, and political corruption. Explore the changing role of the United States in world affairs through WWI and how the United States changes from the end of WWI to the eve of the Great Depression</p> <p>The Great Depression & WWII (1929-1945) -Students explain the causes of the Great Depression and how it affected American society. Explore how the New Deal addressed the Great Depression, transformed American federalism and initiated the welfare state. Examine the causes and course of WWII, the character of the war at home and abroad, and it's reshaping of the U.S. role in world affairs.</p>



Curriculum Goals
Upper School Enrichment Studies

	<p>democracy. Describe the major events (Mayflower Compact, Declaration of Independence, Bill of Rights, etc) and holidays (4th of July, MLK Jr. Day, Veteran's Day, etc.) that represent and celebrate the core democratic values and principles.</p>	<p>Africa that increasingly interacted after 1450. Examine hoe early European exploration and colonization resulted in cultural and ecological interactions among previously unconnected peoples.</p>	<p>to global transformations. They explore how European society experienced political, economic, and cultural transformations in an age of global intercommunication. Students compare and contrast global intercommunication now and long ago.</p>	
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	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
The Arts	<p>Music</p> <ul style="list-style-type: none"> -Students learn to read and write various notes and rhythms and their relationship to playing or singing them. -Students learn music themed vocabulary words to enhance their knowledge of music as a culture as well as understand marking indication in written music. -Students play various instruments and learn their importance in various pieces of music. -Students engage in music from around the world. They discuss the various origins of music styles and instruments and learn the correct playing and singing techniques for different parts of the world and instruments. -Students learn to play the piano, recorder, and guitar at a beginners level. -Students learn about different eras of music and composers. Students discuss musical characteristics of different composers and eras. Students are introduced to various pieces of the Baroque, Classical, and Romantic periods of music. -Students play and discover western instruments and identify instrument families. <p>Art</p> <ul style="list-style-type: none"> -Symmetry: Create symmetrical drawing of half of a magazine image. -Design: Create zentangle patterns. -Forest Landscapes -Self Portraits -Realistic Grid Drawings -Floral Oil Pastels -Art History: Create art in the style of Matisse, Van Gogh, Keith Haring, Eric Carle, Georgia O'Keefe, Monet, and 8-bit Art 			



Curriculum Goals
Upper School Enrichment Studies

	4 th Grade: Chinooks	5 th Grade: Eagles	6 th Grade: Liberty	7 th / 8 th Grade
ICT	<p>Keyboarding -beginning keyboarding skills</p> <p>Microsoft Word -can use the basic functions of Word to create and edit documents</p> <p>Microsoft Excel -can use the basic functions of Excel to create graphs and data displays</p> <p>Internet Safety & Etiquette</p>	<p>Keyboarding -continued keyboarding skills</p> <p>Microsoft Word -can use the basic functions of Word to create and edit documents</p> <p>Microsoft Excel -can use the basic functions of Excel to create graphs and data displays</p> <p>Email -use a school email account to learn the basic functions, safety, and etiquette of email</p> <p>Internet Safety & Etiquette</p>	<p>Keyboarding -continued keyboarding skills</p> <p>Microsoft Word -can use the basic functions of Word to create and edit documents</p> <p>Microsoft Excel -can use the basic functions of Excel to create graphs and data displays</p> <p>Email -use a school email account to learn the basic functions, safety, and etiquette of email</p> <p>Presentation Software -learn how to use various presentation software programs</p> <p>Blogging -learn to create and post on the classroom blog</p> <p>Yearbook -design and edit school yearbook</p> <p>Internet Safety & Etiquette</p>	