

MINNESOTA ACADEMIC STANDARDS GRADES 9-12

Revised 1/10

LANGUAGE ARTS			
STRAND	SUB-STRAND	STANDARD	BENCHMARKS
Reading & Literature	A. Word Recognition, Analysis, and Fluency	(Standard under this heading may be locally determined.)	
	B. Vocabulary Expansion	The student will apply a variety of strategies to expand vocabulary.	<ol style="list-style-type: none"> 1. Acquire, understand and use vocabulary by learning words through explicit vocabulary instruction and independent reading, and appropriately use these words in writing. 2. Determine the meaning of unfamiliar words and metaphors by using dictionaries, context clues and reference books. 3. Identify and analyze analogies. 4. Apply knowledge of Greek and Latin roots, prefixes and suffixes to understand content area vocabulary. 5. Understand the meaning of unknown words using derivations, such as word roots and word origins.
	C. Comprehension	The student will understand the meaning of informational, expository or persuasive texts, using a variety of strategies and will demonstrate literal, interpretive, inferential and evaluative comprehension.	<ol style="list-style-type: none"> 1. Monitor comprehension and know when and how to use strategies to clarify the understanding of a selection 2. Comprehend and evaluate the purpose, accuracy, comprehensiveness, and usefulness of informational materials. 3. Analyze and draw accurate conclusions about information contained in warranties, contracts, job descriptions, technical descriptions and other informational sources, selected from labels, warnings, manuals, directions, applications and forms in order to complete specific tasks. 4. Analyze a variety of nonfiction materials selected from journals, essays, speeches, biographies and autobiographies. 5. Summarize and paraphrase main idea and supporting details. 6. Trace the logical development of an author's argument, point of view or perspective and evaluate the adequacy, accuracy and appropriateness of the author's evidence in a persuasive text. 7. Make inferences and draw conclusions based on explicit and implied information from texts. 8. Evaluate clarity and accuracy of information, as well as the credibility of sources. 9. Identify, understand and explain the various types of fallacies in logic. 10. Synthesize information from multiple selections in order to draw conclusions, make predictions, and form interpretations.

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<p>Reading & Literature</p>	<p>D. Literature</p>	<p>The student will actively engage in the reading process and read, understand, respond to, analyze, interpret, evaluate and appreciate a wide variety of fiction, poetic and nonfiction texts.</p>	<ol style="list-style-type: none"> 1. Read, analyze and evaluate traditional, classical and contemporary works of literary merit from American literature. 2. Read, analyze and evaluate traditional, classical and contemporary works of literary merit from British literature. 3. Read, analyze and evaluate traditional, classical and contemporary works of literary merit from civilizations and countries around the world. 4. Evaluate the impact of an author's decisions regarding word choice, point of view, style and literary elements. 5. Analyze, interpret and evaluate the use of figurative language and imagery in fiction and nonfiction selections, including symbolism, tone, irony and satire. 6. Analyze and evaluate the relationship between and among elements of literature: character, setting, plot, tone, symbolism, rising action, climax, falling action, point of view, theme and conflict/resolution. 7. Evaluate a literary selection from several critical perspectives. 8. Analyze classic and contemporary poems for poetic devices. 9. Analyze the characteristics of literary forms. 10. Interpret the effect of literary and structural devices. 11. Demonstrate how literary works reflect the historical contexts that shaped them. 12. Synthesize ideas and make thematic connections among literary texts, public discourse, media and other disciplines. 13. Read, analyze, and critique dramatic selections by comparing and contrasting ways in which character, scene, dialogue, and staging contribute to the theme and the dramatic effect. 14. Respond to literature using ideas and details from the text to support reactions and make literary connections. 15. Read from and respond to a variety of fiction, poetic and nonfiction texts of increasing complexity for personal enjoyment.
<p>Writing</p>	<p>A. Types of Writing</p>	<p>The student will write in narrative, expository, descriptive, persuasive and critical modes.</p>	<ol style="list-style-type: none"> 1. Plan, organize and compose narrative, expository, descriptive, persuasive, critical and research writing to address a specific audience and purpose.

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Writing	B. Elements of Composition	The student will engage in a writing process with attention to audience, organization, focus, quality of ideas, and a purpose.	<ol style="list-style-type: none"> 1. Generate, gather, and organize ideas for writing. 2. Develop a thesis and clear purpose for writing. 3. Make generalizations and use supporting details. 4. Arrange paragraphs into a logical progression. 5. Revise writing for clarity, coherence, smooth transitions and unity. 6. Apply available technology to develop, revise and edit writing. 7. Generate footnotes, endnotes and bibliographies in a consistent and widely accepted format. 8. Revise, edit and prepare final drafts for intended audiences and purposes.
	C. Spelling, Grammar, and Usage	The student will apply standard English conventions when writing.	<ol style="list-style-type: none"> 1. Understand the differences between formal and informal language styles and use each appropriately. 2. Use an extensive variety of correctly punctuated sentences for meaning and stylistic effect. 3. Edit writing for correct grammar, capitalization, punctuation, spelling, verb tense, sentence structure, and paragraphing to enhance clarity and readability: <ol style="list-style-type: none"> a. Correctly use reflexive case pronouns and nominative and objective case pronouns, including <i>who</i> and <i>whom</i>. b. Correctly use punctuation such as the comma, semicolon, colon, hyphen, and dash. c. Correctly use <i>like/as if</i>, <i>any/any other</i>, <i>this kind/these kinds</i>, <i>who/that</i>, and <i>every/many</i> when they occur in a sentence. d. Correctly use verb forms with attention to subjunctive mood, subject/verb agreement, and active/passive voice. e. Correctly use the possessive pronoun before the gerund.

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Writing	D. Research	The student will locate and use information in reference materials.	<ol style="list-style-type: none"> 1. Use print, electronic databases and online resources to access information, organize ideas, and develop writing. 2. Identify key terms specific to research tools and processes. 3. Narrow the focus of a search by formulating a concise research question or thesis. 4. Develop a research plan. 5. Evaluate and organize relevant information from a variety of sources, verifying the accuracy and usefulness of gathered information. 6. Produce a report with detailed evidence to support a thesis. 7. Distinguish between reliable and questionable Internet sources and apply responsible use of technology. 8. Understand plagiarism and its consequences, and identify ethical issues of research and documentation. 9. Organize and synthesize information from a variety of sources and present it in a logical manner. 10. Credit sources for both quoted and paraphrased ideas. 11. Cite sources of information using a standard method of documentation, such as a style sheet from the Modern Language Association (MLA) or from the American Psychological Association (APA). 12. Proofread the final copy, format correctly and prepare the document for publication or submission.
	E. Handwriting and Word Processing	(Standards under this heading may be locally determined.)	
Speaking, Listening & Viewing	A. Speaking and Listening	The student will demonstrate understanding and communicate effectively through listening and speaking.	<ol style="list-style-type: none"> 1. Distinguish between speaker's opinion and verifiable facts and analyze the credibility of the presentation. 2. Deliver a speech in a logical manner using grammatically correct language, including vocabulary appropriate to the topic, audience and purpose. 3. Understand the relationship between nonverbal, interpersonal, and small group communication. 4. Describe the role of communication in everyday situations (e.g., advertising, informal social, business, formal social, etc.) 5. Understand the effects of media on society and culture. 6. Identify and understand essential elements, skills and implications of persuasion, argumentation, and debate as essential oral skills. 7. Apply assessment criteria to self-evaluation of oral presentations.

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<p>Speaking, Listening & Viewing</p>	<p>C. Media Literacy</p>	<p>The student will critically analyze information found in electronic and print media, and will use a variety of these sources to learn about a topic and represent ideas.</p> <p><i>(At the high school level, media literacy should be addressed across content areas and integrated into the curriculum at the discretion of the local district.)</i></p>	<ol style="list-style-type: none"> 1. Evaluate the accuracy and credibility of information found on Internet sites. 2. Evaluate the logic of reasoning in both print and non-print selections. 3. Evaluate the source's point of view, intended audience and authority. 4. Determine whether the evidence in a selection is appropriate, adequate and accurate. 5. Evaluate the content and effect of persuasive techniques used in print and broadcast media. 6. Make informed evaluations about television, radio, film productions, newspapers and magazines with regard to quality of production, accuracy of information, bias, purpose, message and audience. 7. Critically analyze the messages and points of view employed in different media, including advertising, news programs, web sites, and documentaries. 8. Formulate critical, evaluative questions relevant to a print or non-print selection. 9. Critically analyze and evaluate the strategies employed in news broadcasts, documentaries, and web sites related to clarity, accuracy, effectiveness, bias and relevance of facts. 10. Demonstrate an understanding of ethics in mass communication and describe the characteristics of ethical and unethical behavior.

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MATH

Strand	Standard	No.	Benchmarks
Algebra	Understand the concept of function, and identify important features of functions and other relations using symbolic and graphical methods where appropriate.	9.2.1.1	Understand the definition of a function. Use functional notation and evaluate a function at a given point in its domain. <i>For example:</i> If $f(x) = \frac{1}{x^2 - 3}$, find $f(-4)$.
		9.2.1.2	Distinguish between functions and other relations defined symbolically, graphically or in tabular form.
		9.2.1.3	Find the domain of a function defined symbolically, graphically or in a real-world context. <i>For example:</i> The formula $f(x) = \pi x^2$ can represent a function whose domain is all real numbers, but in the context of the area of a circle, the domain would be restricted to positive x .
		9.2.1.4	Obtain information and draw conclusions from graphs of functions and other relations. <i>For example:</i> If a graph shows the relationship between the elapsed flight time of a golf ball at a given moment and its height at that same moment, identify the time interval during which the ball is at least 100 feet above the ground.
		9.2.1.5	Identify the vertex, line of symmetry and intercepts of the parabola corresponding to a quadratic function, using symbolic and graphical methods, when the function is expressed in the form $f(x) = ax^2 + bx + c$, in the form $f(x) = a(x - h)^2 + k$, or in factored form.
		9.2.1.6	Identify intercepts, zeros, maxima, minima and intervals of increase and decrease from the graph of a function.
		9.2.1.7	Understand the concept of an asymptote and identify asymptotes for exponential functions and reciprocals of linear functions, using symbolic and graphical methods.
		9.2.1.8	Make qualitative statements about the rate of change of a function, based on its graph or table of values. <i>For example:</i> The function $f(x) = 3^x$ increases for all x , but it increases faster when $x > 2$ than it does when $x < 2$.
		9.2.1.9	Determine how translations affect the symbolic and graphical forms of a function. Know how to use graphing technology to examine translations. <i>For example:</i> Determine how the graph of $f(x) = x - h + k$ changes as h and k change.

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Algebra	Recognize linear, quadratic, exponential and other common functions in real-world and mathematical situations; represent these functions with tables, verbal descriptions, symbols and graphs; solve problems involving these functions, and explain results in the original context.	9.2.2.1	Represent and solve problems in various contexts using linear and quadratic functions. <i>For example:</i> Write a function that represents the area of a rectangular garden that can be surrounded with 32 feet of fencing, and use the function to determine the possible dimensions of such a garden if the area must be at least 50 square feet.
		9.2.2.2	Represent and solve problems in various contexts using exponential functions, such as investment growth, depreciation and population growth.
		9.2.2.3	Sketch graphs of linear, quadratic and exponential functions, and translate between graphs, tables and symbolic representations. Know how to use graphing technology to graph these functions.
		9.2.2.4	Express the terms in a geometric sequence recursively and by giving an explicit (closed form) formula, and express the partial sums of a geometric series recursively. <i>For example:</i> A closed form formula for the terms t_n in the geometric sequence 3, 6, 12, 24, ... is $t_n = 3(2)^{n-1}$, where $n = 1, 2, 3, \dots$, and this sequence can be expressed recursively by writing $t_1 = 3$ and $t_n = 2t_{n-1}$, for $n \geq 2$. <i>Another example:</i> The partial sums s_n of the series $3 + 6 + 12 + 24 + \dots$ can be expressed recursively by writing $s_1 = 3$ and $s_n = 3 + 2s_{n-1}$, for $n \geq 2$.
		9.2.2.5	Recognize and solve problems that can be modeled using finite geometric sequences and series, such as home mortgage and other compound interest examples. Know how to use spreadsheets and calculators to explore geometric sequences and series in various contexts.
		9.2.2.6	Sketch the graphs of common non-linear functions such as $f(x) = \sqrt{x}$, $f(x) = x $, $f(x) = \frac{1}{x}$, $f(x) = x^3$, and translations of these functions, such as $f(x) = \sqrt{x-2} + 4$. Know how to use graphing technology to graph these functions.
Algebra	Generate equivalent algebraic expressions involving polynomials and radicals; use algebraic properties to evaluate expressions.	9.2.3.1	Evaluate polynomial and rational expressions and expressions containing radicals and absolute values at specified points in their domains.
		9.2.3.2	Add, subtract and multiply polynomials; divide a polynomial by a polynomial of equal or lower degree.
		9.2.3.3	Factor common monomial factors from polynomials, factor quadratic polynomials, and factor the difference of two squares. <i>For example:</i> $9x^6 - x^4 = (3x^3 - x^2)(3x^3 + x^2)$.

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		9.2.3.4	<p>Add, subtract, multiply, divide and simplify algebraic fractions.</p> <p><i>For example:</i> $\frac{1}{1-x} + \frac{x}{1+x}$ is equivalent to $\frac{1+2x-x^2}{1-x^2}$.</p>
		9.2.3.5	<p>Check whether a given complex number is a solution of a quadratic equation by substituting it for the variable and evaluating the expression, using arithmetic with complex numbers.</p> <p><i>For example:</i> The complex number $\frac{1+i}{2}$ is a solution of $2x^2 - 2x + 1 = 0$, since</p> $2\left(\frac{1+i}{2}\right)^2 - 2\left(\frac{1+i}{2}\right) + 1 = i - (1+i) + 1 = 0.$
		9.2.3.6	<p>Apply the properties of positive and negative rational exponents to generate equivalent algebraic expressions, including those involving n^{th} roots.</p> <p><i>For example:</i> $\sqrt{2} \times \sqrt{7} = 2^{\frac{1}{2}} \times 7^{\frac{1}{2}} = 14^{\frac{1}{2}} = \sqrt{14}$. Rules for computing directly with radicals may also be used: $\sqrt[3]{2} \times \sqrt[3]{x} = \sqrt[3]{2x}$.</p>
		9.2.3.7	<p>Justify steps in generating equivalent expressions by identifying the properties used. Use substitution to check the equality of expressions for some particular values of the variables; recognize that checking with substitution does not guarantee equality of expressions for all values of the variables.</p>
Algebra	<p>Represent real-world and mathematical situations using equations and inequalities involving linear, quadratic, exponential and n^{th} root functions. Solve equations and inequalities symbolically and graphically. Interpret solutions in the original context.</p>	9.2.4.1	<p>Represent relationships in various contexts using quadratic equations and inequalities. Solve quadratic equations and inequalities by appropriate methods including factoring, completing the square, graphing and the quadratic formula. Find non-real complex roots when they exist. Recognize that a particular solution may not be applicable in the original context. Know how to use calculators, graphing utilities or other technology to solve quadratic equations and inequalities.</p> <p><i>For example:</i> A diver jumps from a 20 meter platform with an upward velocity of 3 meters per second. In finding the time at which the diver hits the surface of the water, the resulting quadratic equation has a positive and a negative solution. The negative solution should be discarded because of the context.</p>
		9.2.4.2	<p>Represent relationships in various contexts using equations involving exponential functions; solve these equations graphically or numerically. Know how to use calculators, graphing utilities or other technology to solve these equations.</p>
		9.2.4.3	<p>Recognize that to solve certain equations, number systems need to be extended from whole numbers to integers, from integers to rational numbers, from rational numbers to real numbers, and from real numbers to complex numbers. In particular, non-real complex numbers are needed to solve some quadratic equations with real coefficients.</p>
		9.2.4.4	<p>Represent relationships in various contexts using systems of linear inequalities; solve them graphically. Indicate which parts of the boundary are included in and excluded from the solution set using solid and dotted lines.</p>

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		9.2.4.5	Solve linear programming problems in two variables using graphical methods.
		9.2.4.6	<p>Represent relationships in various contexts using absolute value inequalities in two variables; solve them graphically.</p> <p><i>For example:</i> If a pipe is to be cut to a length of 5 meters accurate to within a tenth of its diameter, the relationship between the length x of the pipe and its diameter y satisfies the inequality $x - 5 \leq 0.1y$.</p>
Algebra	Represent real-world and mathematical situations using equations and inequalities involving linear, quadratic, exponential and n^{th} root functions. Solve equations and inequalities symbolically and graphically. Interpret solutions in the original context.	9.2.4.7	<p>Solve equations that contain radical expressions. Recognize that extraneous solutions may arise when using symbolic methods.</p> <p><i>For example:</i> The equation $\sqrt{x-9} = 9\sqrt{x}$ may be solved by squaring both sides to obtain $x - 9 = 81x$, which has the solution $x = -\frac{9}{80}$. However, this is not a solution of the original equation, so it is an extraneous solution that should be discarded. The original equation has no solution in this case.</p> <p><i>Another example:</i> Solve $\sqrt[3]{-x+1} = -5$.</p>
		9.2.4.8	Assess the reasonableness of a solution in its given context and compare the solution to appropriate graphical or numerical estimates; interpret a solution in the original context.
Geometry & Measurement	Calculate measurements of plane and solid geometric figures; know that physical measurements depend on the choice of a unit and that they are approximations.	9.3.1.1	<p>Determine the surface area and volume of pyramids, cones and spheres. Use measuring devices or formulas as appropriate.</p> <p><i>For example:</i> Measure the height and radius of a cone and then use a formula to find its volume.</p>
		9.3.1.2	<p>Compose and decompose two- and three-dimensional figures; use decomposition to determine the perimeter, area, surface area and volume of various figures.</p> <p><i>For example:</i> Find the volume of a regular hexagonal prism by decomposing it into six equal triangular prisms.</p>
		9.3.1.3	<p>Understand that quantities associated with physical measurements must be assigned units; apply such units correctly in expressions, equations and problem solutions that involve measurements; and convert between measurement systems.</p> <p><i>For example:</i> 60 miles/hour = 60 miles/hour \times 5280 feet/mile \times 1 hour/3600 seconds = 88 feet/second.</p>

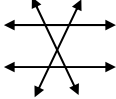
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		9.3.1.4	Understand and apply the fact that the effect of a scale factor k on length, area and volume is to multiply each by k , k^2 and k^3 , respectively.
Geometry & Measurement	Calculate measurements of plane and solid geometric figures; know that physical measurements depend on the choice of a unit and that they are approximations.	9.3.1.5	Make reasonable estimates and judgments about the accuracy of values resulting from calculations involving measurements. <i>For example:</i> Suppose the sides of a rectangle are measured to the nearest tenth of a centimeter at 2.6 cm and 9.8 cm. Because of measurement errors, the width could be as small as 2.55 cm or as large as 2.65 cm, with similar errors for the height. These errors affect calculations. For instance, the actual area of the rectangle could be smaller than 25 cm^2 or larger than 26 cm^2 , even though $2.6 \times 9.8 = 25.48$.
		9.3.2.1	Understand the roles of axioms, definitions, undefined terms and theorems in logical arguments.
	Construct logical arguments, based on axioms, definitions and theorems, to prove theorems and other results in geometry.	9.3.2.2	Accurately interpret and use words and phrases such as "if...then," "if and only if," "all," and "not." Recognize the logical relationships between an "if...then" statement and its inverse, converse and contrapositive. <i>For example:</i> The statement "If you don't do your homework, you can't go to the dance" is not logically equivalent to its inverse "If you do your homework, you can go to the dance."
		9.3.2.3	Assess the validity of a logical argument and give counterexamples to disprove a statement.
		9.3.2.4	Construct logical arguments and write proofs of theorems and other results in geometry, including proofs by contradiction. Express proofs in a form that clearly justifies the reasoning, such as two-column proofs, paragraph proofs, flow charts or illustrations. <i>For example:</i> Prove that the sum of the interior angles of a pentagon is 540° using the fact that the sum of the interior angles of a triangle is 180° .
		9.3.2.5	Use technology tools to examine theorems, make and test conjectures, perform constructions and develop mathematical reasoning skills in multi-step problems. The tools may include compass and straight edge, dynamic geometry software, design software or Internet applets.

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	Know and apply properties of geometric figures to solve real-world and mathematical problems and to logically justify results in geometry.	9.3.3.1	Know and apply properties of parallel and perpendicular lines, including properties of angles formed by a transversal, to solve problems and logically justify results. <i>For example:</i> Prove that the perpendicular bisector of a line segment is the set of all points equidistant from the two endpoints, and use this fact to solve problems and justify other results.
Strand	Standard	No.	Benchmarks
Geometry & Measurement	Know and apply properties of geometric figures to solve real-world and mathematical problems and to logically justify results in geometry.	9.3.3.2	Know and apply properties of angles, including corresponding, exterior, interior, vertical, complementary and supplementary angles, to solve problems and logically justify results. <i>For example:</i> Prove that two triangles formed by a pair of intersecting lines and a pair of parallel lines (an "X" trapped between two parallel lines) are similar. 
		9.3.3.3	Know and apply properties of equilateral, isosceles and scalene triangles to solve problems and logically justify results. <i>For example:</i> Use the triangle inequality to prove that the perimeter of a quadrilateral is larger than the sum of the lengths of its diagonals.
		9.3.3.4	Apply the Pythagorean Theorem and its converse to solve problems and logically justify results. <i>For example:</i> When building a wooden frame that is supposed to have a square corner, ensure that the corner is square by measuring lengths near the corner and applying the Pythagorean Theorem.
		9.3.3.5	Know and apply properties of right triangles, including properties of 45-45-90 and 30-60-90 triangles, to solve problems and logically justify results. <i>For example:</i> Use 30-60-90 triangles to analyze geometric figures involving equilateral triangles and hexagons. <i>Another example:</i> Determine exact values of the trigonometric ratios in these special triangles using relationships among the side lengths.

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		9.3.3.6	<p>Know and apply properties of congruent and similar figures to solve problems and logically justify results.</p> <p><i>For example:</i> Analyze lengths and areas in a figure formed by drawing a line segment from one side of a triangle to a second side, parallel to the third side.</p> <p><i>Another example:</i> Determine the height of a pine tree by comparing the length of its shadow to the length of the shadow of a person of known height.</p> <p><i>Another example:</i> When attempting to build two identical 4-sided frames, a person measured the lengths of corresponding sides and found that they matched. Can the person conclude that the shapes of the frames are congruent?</p>
		9.3.3.7	<p>Use properties of polygons—including quadrilaterals and regular polygons—to define them, classify them, solve problems and logically justify results.</p> <p><i>For example:</i> Recognize that a rectangle is a special case of a trapezoid.</p> <p><i>Another example:</i> Give a concise and clear definition of a kite.</p>
Geometry & Measurement	Know and apply properties of geometric figures to solve real-world and mathematical problems and to logically justify results in geometry.	9.3.3.8	<p>Know and apply properties of a circle to solve problems and logically justify results.</p> <p><i>For example:</i> Show that opposite angles of a quadrilateral inscribed in a circle are supplementary.</p>
	Solve real-world and mathematical geometric problems using algebraic methods.	9.3.4.1	<p>Understand how the properties of similar right triangles allow the trigonometric ratios to be defined, and determine the sine, cosine and tangent of an acute angle in a right triangle.</p>
		9.3.4.2	<p>Apply the trigonometric ratios sine, cosine and tangent to solve problems, such as determining lengths and areas in right triangles and in figures that can be decomposed into right triangles. Know how to use calculators, tables or other technology to evaluate trigonometric ratios.</p> <p><i>For example:</i> Find the area of a triangle, given the measure of one of its acute angles and the lengths of the two sides that form that angle.</p>
		9.3.4.3	<p>Use calculators, tables or other technologies in connection with the trigonometric ratios to find angle measures in right triangles in various contexts.</p>
		9.3.4.4	<p>Use coordinate geometry to represent and analyze line segments and polygons, including determining lengths, midpoints and slopes of line segments.</p>
9.3.4.5	<p>Know the equation for the graph of a circle with radius r and center (h, k), $(x - h)^2 + (y - k)^2 = r^2$, and justify this equation using the Pythagorean Theorem and properties of translations.</p>		

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		9.3.4.6	<p>Use numeric, graphic and symbolic representations of transformations in two dimensions, such as reflections, translations, scale changes and rotations about the origin by multiples of 90°, to solve problems involving figures on a coordinate grid.</p> <p><i>For example:</i> If the point (3,-2) is rotated 90° counterclockwise about the origin, it becomes the point (2, 3).</p>
		9.3.4.7	<p>Use algebra to solve geometric problems unrelated to coordinate geometry, such as solving for an unknown length in a figure involving similar triangles, or using the Pythagorean Theorem to obtain a quadratic equation for a length in a geometric figure.</p>
Data Analysis & Probability	Display and analyze data; use various measures associated with data to draw conclusions, identify trends and describe relationships.	9.4.1.1	<p>Describe a data set using data displays, including box-and-whisker plots; describe and compare data sets using summary statistics, including measures of center, location and spread. Measures of center and location include mean, median, quartile and percentile. Measures of spread include standard deviation, range and inter-quartile range. Know how to use calculators, spreadsheets or other technology to display data and calculate summary statistics.</p>
		9.4.1.2	<p>Analyze the effects on summary statistics of changes in data sets.</p> <p><i>For example:</i> Understand how inserting or deleting a data point may affect the mean and standard deviation.</p> <p><i>Another example:</i> Understand how the median and interquartile range are affected when the entire data set is transformed by adding a constant to each data value or multiplying each data value by a constant.</p>
		9.4.1.3	<p>Use scatterplots to analyze patterns and describe relationships between two variables. Using technology, determine regression lines (line of best fit) and correlation coefficients; use regression lines to make predictions and correlation coefficients to assess the reliability of those predictions.</p>
		9.4.1.4	<p>Use the mean and standard deviation of a data set to fit it to a normal distribution (bell-shaped curve) and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.</p> <p><i>For example:</i> After performing several measurements of some attribute of an irregular physical object, it is appropriate to fit the data to a normal distribution and draw conclusions about measurement error.</p> <p><i>Another example:</i> When data involving two very different populations is combined, the resulting histogram may show two distinct peaks, and fitting the data to a normal distribution is not appropriate.</p>

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	<p>Explain the uses of data and statistical thinking to draw inferences, make predictions and justify conclusions.</p>	<p>9.4.2.1</p>	<p>Evaluate reports based on data published in the media by identifying the source of the data, the design of the study, and the way the data are analyzed and displayed. Show how graphs and data can be distorted to support different points of view. Know how to use spreadsheet tables and graphs or graphing technology to recognize and analyze distortions in data displays.</p> <p><i>For example:</i> Displaying only part of a vertical axis can make differences in data appear deceptively large.</p>
<p>Data Analysis & Probability</p>	<p>Calculate probabilities and apply probability concepts to solve real-world and mathematical problems.</p>	<p>9.4.2.2</p>	<p>Identify and explain misleading uses of data; recognize when arguments based on data confuse correlation and causation.</p>
		<p>9.4.2.3</p>	<p>Design simple experiments and explain the impact of sampling methods, bias and the phrasing of questions asked during data collection.</p>
		<p>9.4.3.1</p>	<p>Select and apply counting procedures, such as the multiplication and addition principles and tree diagrams, to determine the size of a sample space (the number of possible outcomes) and to calculate probabilities.</p> <p><i>For example:</i> If one girl and one boy are picked at random from a class with 20 girls and 15 boys, there are $20 \times 15 = 300$ different possibilities, so the probability that a particular girl is chosen together with a particular boy is $\frac{1}{300}$.</p>
		<p>9.4.3.2</p>	<p>Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.</p>
		<p>9.4.3.3</p>	<p>Understand that the Law of Large Numbers expresses a relationship between the probabilities in a probability model and the experimental probabilities found by performing simulations or experiments involving the model.</p>
<p>9.4.3.4</p>	<p>Use random numbers generated by a calculator or a spreadsheet, or taken from a table, to perform probability simulations and to introduce fairness into decision making.</p> <p><i>For example:</i> If a group of students needs to fairly select one of its members to lead a discussion, they can use a random number to determine the selection.</p>		
<p>9.4.3.5</p>	<p>Apply probability concepts such as intersections, unions and complements of events, and conditional probability and independence, to calculate probabilities and solve problems.</p> <p><i>For example:</i> The probability of tossing at least one head when flipping a fair coin three times can be calculated by looking at the complement of this event (flipping three tails in a row).</p>		

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		9.4.3.6	Describe the concepts of intersections, unions and complements using Venn diagrams. Understand the relationships between these concepts and the words AND, OR, NOT, as used in computerized searches and spreadsheets.
		9.4.3.7	<p>Understand and use simple probability formulas involving intersections, unions and complements of events.</p> <p><i>For example:</i> If the probability of an event is p, then the probability of the complement of an event is $1 - p$; the probability of the intersection of two independent events is the product of their probabilities.</p> <p><i>Another example:</i> The probability of the union of two events equals the sum of the probabilities of the two individual events minus the probability of the intersection of the events.</p>
Data Analysis & Probability	Calculate probabilities and apply probability concepts to solve real-world and mathematical problems.	9.4.3.8	<p>Apply probability concepts to real-world situations to make informed decisions.</p> <p><i>For example:</i> Explain why a hockey coach might decide near the end of the game to pull the goalie to add another forward position player if the team is behind.</p> <p><i>Another example:</i> Consider the role that probabilities play in health care decisions, such as deciding between having eye surgery and wearing glasses.</p>
		9.4.3.9	<p>Use the relationship between conditional probabilities and relative frequencies in contingency tables.</p> <p><i>For example:</i> A table that displays percentages relating gender (male or female) and handedness (right-handed or left-handed) can be used to determine the conditional probability of being left-handed, given that the gender is male.</p>

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SCIENCE

Strand	Sub-Strand	Standard	No.	Benchmarks
The Nature of Science and Engineering	1. The Practice of Science	1. Science is a way of knowing about the natural world and is characterized by empirical criteria, logical argument and skeptical review.	9.1.1.1.1	Explain the implications of the assumption that the rules of the universe are the same everywhere and these rules can be discovered by careful and systematic investigation.
			9.1.1.1.2	Understand that scientists conduct investigations for a variety of reasons, including: to discover new aspects of the natural world, to explain observed phenomena, to test the conclusions of prior investigations, or to test the predictions of current theories.
			9.1.1.1.3	Explain how the traditions and norms of science define the bounds of professional scientific practice and reveal instances of scientific error or misconduct. <i>For example:</i> The use of peer review, publications and presentations.
			9.1.1.1.4	Explain how societal and scientific ethics impact research practices. <i>For example:</i> Research involving human subjects may be conducted only with the informed consent of the subjects.
			9.1.1.1.5	Identify sources of bias and explain how bias might influence the direction of research and the interpretation of data. <i>For example:</i> How funding of research can influence questions studied, procedures used, analysis of data, and communication of results.
			9.1.1.1.6	Describe how changes in scientific knowledge generally occur in incremental steps that include and build on earlier knowledge.
			9.1.1.1.7	Explain how scientific and technological innovations - as well as new evidence - can challenge portions of, or entire accepted theories and models including, but not limited to: cell theory, atomic theory, theory of evolution, plate tectonic theory, germ theory of disease, and the big bang theory.
		9.1.1.2.1	2. Scientific inquiry uses multiple interrelated processes to investigate and explain the natural world.	Formulate a testable hypothesis, design and conduct an experiment to test the hypothesis, analyze the data, consider alternative explanations and draw conclusions supported by evidence from the investigation.
		9.1.1.2.2		Evaluate the explanations proposed by others by examining and comparing evidence, identifying faulty reasoning, pointing out statements that go beyond the scientifically acceptable evidence, and

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				suggesting alternative scientific explanations.
			9.1.1.2.3	Identify the critical assumptions and logic used in a line of reasoning to judge the validity of a claim.
			9.1.1.2.4	Use primary sources or scientific writings to identify and explain how different types of questions and their associated methodologies are used by scientists for investigations in different disciplines.
	2. The Practice of Engineering	1. Engineering is a way of addressing human needs by applying science concepts and mathematical techniques to develop new products, tools, processes and systems.	9.1.2.1.1	Understand that engineering designs and products are often continually checked and critiqued for alternatives, risks, costs and benefits, so that subsequent designs are refined and improved. <i>For example:</i> If the price of an essential raw material changes, the product design may need to be changed.
			9.1.2.1.2	Recognize that risk analysis is used to determine the potential positive and negative consequences of using a new technology or design, including the evaluation of causes and effects of failures. <i>For example:</i> Risks and benefits associated with using lithium batteries.
			9.1.2.1.3	Explain and give examples of how, in the design of a device, engineers consider how it is to be manufactured, operated, maintained, replaced and disposed of.
The Nature of Science and Engineering		2. Engineering design is an analytical and creative process of devising a solution to meet a need or solve a specific problem.	9.1.2.2.1	Identify a problem and the associated constraints on possible design solutions. <i>For example:</i> Constraints can include time, money, scientific knowledge and available technology.
				9.1.2.2.2
	3. Interactions Among Science, Technology, Engineering, Mathematics, and	1. Natural and designed systems are made up of components that act within a system and interact with other systems.	9.1.3.1.1	Describe a system, including specifications of boundaries and subsystems, relationships to other systems, and identification of inputs and expected outputs. <i>For example:</i> A power plant or ecosystem.
				9.1.3.1.2

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	Society			but appear because of the interaction of those parts.
			9.1.3.1.3	Describe how positive and/or negative feedback occur in systems. <i>For example:</i> The greenhouse effect.
		2. Men and women throughout the history of all cultures, including Minnesota American Indian tribes and communities, have been involved in scientific inquiry and engineering design.	9.1.3.2.1	Provide examples of how diverse cultures, including natives from all of the Americas, have contributed scientific and mathematical ideas and technological inventions. <i>For example:</i> Native American understanding of ecology; Lisa Meitner's contribution to understanding radioactivity; Tesla's ideas and inventions relating to electricity; Watson, Crick and Franklin's discovery of the structure of DNA; or how George Washington Carver's ideas changed land use.
			9.1.3.2.2	Analyze possible careers in science and engineering in terms of education requirements, working practices and rewards.
The Nature of Science and Engineering	3. Interactions Among Science, Technology, Engineering, Mathematics, and Society	3. Science and engineering operate in the context of society and both influence and are influenced by this context.	9.1.3.3.1	Describe how values and constraints affect science and engineering. <i>For example:</i> Economic, environmental, social, political, ethical, health, safety and sustainability issues.
			9.1.3.3.2	Communicate, justify and defend the procedures and results of a scientific inquiry or engineering design project using verbal, graphic, quantitative, virtual or written means.
			9.1.3.3.3	Describe how scientific investigations and engineering processes require multi-disciplinary contributions and efforts. <i>For example:</i> Nanotechnology, climate change, agriculture or biotechnology.
		4. Science, technology, engineering and mathematics rely on each other to enhance knowledge and understanding.	9.1.3.4.1	Describe how technological problems and advances often create a demand for new scientific knowledge, improved mathematics and new technologies.
			9.1.3.4.2	Determine and use appropriate safety procedures, tools, computers and measurement instruments in science and engineering contexts. <i>For example:</i> Consideration of chemical and biological hazards in the lab.
			9.1.3.4.3	Select and use appropriate numeric, symbolic, pictorial, or graphical representation to communicate scientific ideas, procedures and experimental results.

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			9.1.3.4.4	Relate the reliability of data to consistency of results, identify sources of error, and suggest ways to improve data collection and analysis. <i>For example:</i> Use statistical analysis or error analysis to make judgments about the validity of results.	
			9.1.3.4.5	Demonstrate how unit consistency and dimensional analysis can guide the calculation of quantitative solutions and verification of results.	
			9.1.3.4.6	Analyze the strengths and limitations of physical, conceptual, mathematical and computer models used by scientists and engineers.	
Physical Science	1. Matter	1. The structure of the atom determines chemical properties of elements.	9.2.1.1.1	Describe the relative charges, masses, and locations of the protons, neutrons, and electrons in an atom of an element.	
			9.2.1.1.2	Describe how experimental evidence led Dalton, Rutherford, Thompson, Chadwick and Bohr to develop increasingly accurate models of the atom.	
			9.2.1.1.3	Explain the arrangement of the elements on the Periodic Table, including the relationships among elements in a given column or row.	
			9.2.1.1.4	Explain that isotopes of an element have different numbers of neutrons and that some are unstable and emit particles and/or radiation. <i>For example:</i> Some rock formations and building materials emit radioactive radon gas. <i>Another example:</i> The predictable rate of decay of radioactive isotopes makes it possible to estimate the age of some materials, and makes them useful in some medical procedures.	
		2. Chemical reactions involve the rearrangement of atoms as chemical bonds are broken and formed through transferring or sharing of electrons and the absorption or release of energy.	9.2.1.2.1	Describe the role of valence electrons in the formation of chemical bonds.	
			9.2.1.2.2	Explain how the rearrangement of atoms in a chemical reaction illustrates the law of conservation of mass.	
			9.2.1.2.3	Describe a chemical reaction using words and symbolic equations. <i>For example:</i> The reaction of hydrogen gas with oxygen gas can be written: $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$.	
			9.2.1.2.4	Relate exothermic and endothermic chemical reactions to temperature and energy changes.	
		2. Motion	2. An object's mass and	9.2.2.2.1	Recognize that inertia is the property of an object that causes it to

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		the forces on it affect the motion of an object.		resist changes in motion.
			9.2.2.2.2	Explain and calculate the acceleration of an object subjected to a set of forces in one dimension ($F=ma$).
			9.2.2.2.3	Demonstrate that whenever one object exerts force on another, a force equal in magnitude and opposite in direction is exerted by the second object back on the first object.
Physical Science	2. Motion	2. Forces and object mass determine the motion of an object.	9.2.2.2.4	Use Newton's universal law of gravitation to describe and calculate the attraction between massive objects based on the distance between them. <i>For example:</i> Calculate the weight of a person on different planets in the solar system.
	3. Energy	2. Energy can be transformed within a system or transferred to other systems or the environment, but is always conserved	9.2.3.2.1	Identify the energy forms and explain the transfers of energy involved in the operation of common devices. <i>For example:</i> Light bulbs, electric motors, automobiles or bicycles.
			9.2.3.2.2	Calculate and explain the energy, work and power involved in energy transfers in a mechanical system. <i>For example:</i> Compare walking and running up or down steps.
			9.2.3.2.3	Describe how energy is transferred through sound waves and how pitch and loudness are related to wave properties of frequency and amplitude.
			9.2.3.2.4	Explain and calculate current, voltage and resistance, and describe energy transfers in simple electric circuits.
			9.2.3.2.5	Describe how an electric current produces a magnetic force, and how this interaction is used in motors and electromagnets to produce mechanical energy.
			9.2.3.2.6	Compare fission and fusion in terms of the reactants, the products and the conversion from matter into energy. <i>For example:</i> The fusion of hydrogen produces energy in the sun. <i>Another example:</i> The use of chain reactions in nuclear reactors.
			9.2.3.2.7	Describe the properties and uses of forms of electromagnetic radiation from radio frequencies through gamma radiation. <i>For example:</i> Compare the energy of microwaves and X-rays.
	4. Human	1. There are benefits, costs and risks to	9.2.4.1.1	Compare local and global environmental and economic advantages and disadvantages of generating electricity using various sources or

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	Interaction with Physical Systems	different means of generating and using energy.		energy. <i>For example:</i> Fossil fuels, nuclear fission, wind, sun or tidal energy.	
Earth and Space Science	1. Earth Structure and Processes	1. The relationships among earthquakes, mountains, volcanoes, fossil deposits, rock layers and ocean features provide evidence for the theory of plate tectonics.	9.3.1.1.1	Compare and contrast the interaction of tectonic plates at convergent and divergent boundaries. <i>For example:</i> Compare the kinds of magma that emerge at plate boundaries.	
			9.3.1.1.2	Describe the trade-offs involved when technological developments impact the way we use energy, natural resources, or synthetic materials. <i>For example:</i> Fluorescent light bulbs use less energy than incandescent lights, but contain toxic mercury.	
			9.3.1.1.3	Describe how the pattern of magnetic reversals and rock ages on both sides of a mid-ocean ridge provides evidence of sea-floor spreading.	
			9.3.1.1.4	Explain how the rock record provides evidence for plate movement. <i>For example:</i> Similarities found in fossils, certain types of rocks, or patterns of rock layers in various locations.	
			9.3.1.1.5	Describe how experimental and observational evidence led to the theory of plate tectonics.	
		9.3.1.3.1	3. By observing rock sequences and using fossils to correlate the sequences at various locations, geologic events can be inferred and geologic time can be estimated.	Use relative dating techniques to explain how the structures of the Earth and life on Earth have changed over short and long periods of time.	
		9.3.1.3.2		Cite evidence from the rock record for changes in the composition of the global atmosphere as life evolved on Earth. <i>For example:</i> Banded iron formations as found in Minnesota's Iron Range.	
		9.3.2.1.1	2. Interdependence Within the Earth System	1. The Earth system has internal and external sources of energy, which produce heat and drive	Compare and contrast the energy sources of the Earth, including the sun, the decay of radioactive isotopes and gravitational energy.
		9.3.2.1.2			Explain how the outward transfer of Earth's internal heat drives the convection circulation in the mantle to move tectonic plates.

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Earth and Space Science		the motion of material in the oceans, atmosphere and solid earth.		
		2. Global climate is determined by distribution of energy from the sun at the Earth's surface.	9.3.2.2.1	Explain how Earth's rotation, ocean currents, configuration of mountain ranges, and composition of the atmosphere influence the absorption and distribution of energy, which contributes to global climatic patterns.
			9.3.2.2.2.	Explain how evidence from the geologic record, including ice core samples, indicates that climate changes have occurred at varying rates over geologic time and continue to occur today.
		3. The cycling of materials through different reservoirs of the Earth's system is powered by the Earth's sources of energy.	9.3.2.3.1	Trace the cyclical movement of carbon, oxygen and nitrogen through the lithosphere, hydrosphere, atmosphere and biosphere. <i>For example:</i> The burning of fossil fuels contributes to the greenhouse effect.
	3. The Universe	2. The solar system, sun, and Earth formed over billions of years.	9.3.3.2.1	Describe how the solar system formed from a nebular cloud of dust and gas 4.6 billion years ago.
			9.3.3.2.2.	Explain how the Earth evolved into its present habitable form through interactions among the solid earth, the oceans, the atmosphere and organisms.
			9.3.3.2.3.	Compare and contrast the environmental conditions that make life possible on Earth with conditions found on the other planets and moons of our solar system.
		3. The big bang theory states that the universe expanded from a hot, dense chaotic mass, after which chemical elements formed and clumped together to eventually form stars and galaxies.	9.3.3.3.1	Explain how evidence, including the Doppler shift of light from distant stars and cosmic background radiation, is used to understand the composition, early history and expansion of the universe.
			9.3.3.3.2	Explain how gravitational clumping leads to nuclear fusion, producing energy and the chemical elements of a star.
		4. Human Interactions with the Earth System	1. People consider potential benefits, costs and risks to make decisions on how they interact with natural systems.	9.3.4.1.1
9.3.4.1.2	Explain how human activity and natural processes are altering the			

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				hydrosphere, biosphere, lithosphere and atmosphere, including pollution, topography and climate. <i>For example:</i> Active volcanoes and the burning of fossil fuels contribute to the greenhouse effect.	
Strand	Sub-Strand	Standard	No.	Benchmarks	
Life Science	1. Structure and Function in Living Systems	1. Organisms use the interaction of cellular processes as well as tissues and organ systems to maintain homeostasis.	9.4.1.1.1	Explain how cell processes are influenced by internal and external factors, such as pH and temperature, and how cells and organisms respond to changes in their environment to maintain homeostasis.	
			9.4.1.1.2	Describe how the functions of individual organ systems are integrated to maintain homeostasis in an organism.	
		2. Cells and cell structures have specific functions that allow an organism to grow, survive and reproduce.	9.4.1.2.1	Recognize that cells are composed primarily of a few elements (carbon, hydrogen, oxygen, nitrogen, phosphorus, and sulfur), and describe the basic molecular structures and the primary functions of carbohydrates, lipids, proteins and nucleic acids.	
			9.4.1.2.2	Recognize that the work of the cell is carried out primarily by proteins, most of which are enzymes, and that protein function depends on the amino acid sequence and the shape it takes as a consequence of the interactions between those amino acids.	
			9.4.1.2.3	Describe how viruses, prokaryotic cells and eukaryotic cells differ in relative size, complexity and general structure.	
		2. Cells and cell structures have specific functions that allow an organism to grow, survive and reproduce.	9.4.1.2.4	Explain the function and importance of cell organelles for prokaryotic and/or eukaryotic cells as related to the basic cell processes of respiration, photosynthesis, protein synthesis and cell reproduction.	
			9.4.1.2.5	Compare and contrast passive transport (including osmosis and facilitated transport) with active transport, such as endocytosis and exocytosis.	
			9.4.1.2.6	Explain the process of mitosis in the formation of identical new cells and maintaining chromosome number during asexual reproduction.	
		2. Interdependence Among Living Systems	1. The interrelationship and interdependence of organisms generate dynamic biological communities in ecosystems.	9.4.2.1.1	Describe factors that affect the carrying capacity of an ecosystem and relate these to population growth.
				9.4.2.1.2	Explain how ecosystems can change as a result of the introduction of one or more new species. <i>For example:</i> The effect of migration, localized evolution or disease organisms.
	2. Matter cycles and energy flows through		9.4.2.2.1	Use words and equations to differentiate between the processes of photosynthesis and respiration in terms of energy flow, beginning	

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Life Science		different levels of organization of living systems and the physical environment, as chemical elements are combined in different ways.		reactants and end products.	
			9.4.2.2.2	Explain how matter and energy is transformed and transferred among organisms in an ecosystem, and how energy is dissipated as heat into the environment.	
	3. Evolution in Living Systems	1. Genetic information found in the cell provides information for assembling proteins, which dictate the expression of traits in an individual.		9.4.3.1.1	Explain the relationships among DNA, genes and chromosomes.
				9.4.3.1.2	In the context of a monohybrid cross, apply the terms phenotype, genotype, allele, homozygous and heterozygous.
				9.4.3.1.3	Describe the process of DNA replication and the role of DNA and RNA in assembling protein molecules.
		2. Variation within a species is the natural result of new inheritable characteristics occurring from new combinations of existing genes or from mutations of genes in reproductive cells.		9.4.3.2.1	Use concepts from Mendel's Laws of Segregation and Independent Assortment to explain how sorting and recombination (crossing over) of genes during sexual reproduction (meiosis) increases the occurrence of variation in a species.
				9.4.3.2.2	Use the processes of mitosis and meiosis to explain the advantages and disadvantages of asexual and sexual reproduction.
				9.4.3.2.3	Explain how mutations like deletions, insertions, rearrangements or substitutions of DNA segments in gametes may have no effect, may harm, or rarely may be beneficial, and can result in genetic variation within a species.
				9.4.3.3.1	Describe how evidence led Darwin to develop the theory of natural selection and common descent to explain evolution.
				9.4.3.3.2	Use scientific evidence, including the fossil record, homologous structures, and genetic and/or biochemical similarities, to show evolutionary relationships among species.
9.4.3.3.3				Recognize that artificial selection has led to offspring through successive generations that can be very different in appearance and behavior from their distant ancestors.	
3. Evolution by natural selection is a scientific explanation for the history and diversity of life on Earth.			9.4.3.3.4	Explain why genetic variation within a population is essential for evolution to occur.	
	9.4.3.3.5		Explain how competition for finite resources and the changing environment promotes natural selection on offspring survival, depending on whether the offspring have characteristics that are advantageous or disadvantageous in the new environment.		
	9.4.3.3.6		Explain how genetic variation between two populations of a given species is due, in part, to different selective pressures acting independently on each population and how, over time, these		

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				differences can lead to the development of new species.
	4. Human Interactions with Living Systems	1. Human activity has consequences on living organisms and ecosystems.	9.4.4.1.1	Describe the social, economic and ecological risks and benefits of biotechnology in agriculture and medicine. <i>For example:</i> Selective breeding, genetic engineering, and antibiotic development and use.
			9.4.4.1.2	Describe the social, economic and ecological risks and benefits of changing a natural ecosystem as a result of human activity. <i>For example:</i> Changing the temperature or composition of water, air or soil; altering populations and communities; developing artificial ecosystems; or changing the use of land or water.
			9.4.4.1.3	Describe contributions from diverse cultures, including Minnesota American Indian tribes and communities, to the understanding of interactions among humans and living systems. <i>For example:</i> American Indian understanding of sustainable land use practices.
		2. Personal and community health can be affected by the environment, body functions and human behavior.	9.4.4.2.1	Describe how some diseases can sometimes be predicted by genetic testing and how this affects parental and community decisions.
			9.4.4.2.2	Explain how the body produces antibodies to fight disease and how vaccines assist this process.
			9.4.4.2.3	Describe how the immune system sometimes attacks some of the body's own cells and how some allergic reactions are caused by the body's immune responses to usually harmless environmental substances.
			9.4.4.2.4	Explain how environmental factors and personal decisions, such as water quality, air quality and smoking affect personal and community health.
			9.4.4.2.5	Recognize that a gene mutation in a cell can result in uncontrolled cell division called cancer, and how exposure of cells to certain chemicals and radiation increases mutations and thus increases the chance of cancer.
		The Nature of Science and Engineering	3. Interactions Among Science, Technology, Engineering, Mathematics, and	3. Developments in chemistry affect society and societal concerns affect the field of chemistry.
4. Physical and	9C.1.3.4.1			Use significant figures and an understanding of accuracy and

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	Society	mathematical models are used to describe physical systems.		precision in scientific measurements to determine and express the uncertainty of a result.
Physical Science	1. Matter	1. The periodic table illustrates how patterns in the physical and chemical properties of elements are related to atomic structure.	9C.2.1.1.1	Explain the relationship of an element's position on the periodic table to its atomic number and electron configuration.
			9C.2.1.1.2	Identify and compare trends on the periodic table, including reactivity and relative sizes of atoms and ions; use the trends to explain the properties of subgroups, including metals, non-metals, alkali metals, alkaline earth metals, halogens and noble gases.
		2. Chemical and physical properties of matter result from the ability of atoms to form bonds.	9C.2.1.2.1	Explain how elements combine to form compounds through ionic and covalent bonding.
			9C.2.1.2.2	Compare and contrast the structure, properties and uses of organic compounds, such as hydrocarbons, alcohols, sugars, fats and proteins.
			9C.2.1.2.3	Use IUPAC (International Union of Pure and Applied Chemistry) nomenclature to write chemical formulas and name molecular and ionic compounds, including those that contain polyatomic ions.
			9C.2.1.2.4	Determine the molar mass of a compound from its chemical formula and a table of atomic masses; convert the mass of a molecular substance to moles, number of particles, or volume of gas at standard temperature and pressure.
			9C.2.1.2.5	Determine percent composition, empirical formulas and molecular formulas of simple compounds.
Physical Science	1. Matter		9C.2.1.2.6	Describe the dynamic process by which solutes dissolve in solvents, and calculate concentrations, including percent concentration, molarity and parts per million.
			9C.2.1.2.7	Explain the role of solubility of solids, liquids and gases in natural and designed systems. <i>For example:</i> The presence of heavy metals in water and the atmosphere. <i>Another example:</i> Development and use of alloys.
		3. Chemical reactions describe a chemical change in which one or more reactants are transformed into one or more products.	9C.2.1.3.1	Classify chemical reactions as double replacement, single replacement, synthesis, decomposition or combustion.
			9C.2.1.3.2	Use solubility and activity of ions to determine whether a double replacement or single replacement reaction will occur.
			9C.2.1.3.3	Relate the properties of acids and bases to the ions they contain and predict the products of an acid-base reaction.
		9C.2.1.3.4	Balance chemical equations by applying the laws of conservation of	

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				mass and constant composition.
			9C.2.1.3.5	Use the law of conservation of mass to describe and calculate relationships in a chemical reaction, including molarity, mole/mass relationships, mass/volume relations, limiting reactants and percent yield.
			9C.2.1.3.6	Describe the factors that affect the rate of a chemical reaction, including temperature, pressure, mixing, concentration, particle size, surface area and catalyst.
			9C.2.1.3.7	Recognize that some chemical reactions are reversible and that not all chemical reactions go to completion.
		4. States of matter can be described in terms of motion of molecules. The properties and behavior of gases can be explained using the kinetic molecular theory.	9C.2.1.4.1	Use kinetic molecular theory to explain how changes in energy content affect the state of matter (solid, liquid and gaseous phases).
			9C.2.1.4.2	Use the kinetic molecular theory to explain the behavior of gases and the relationship among temperature, pressure, volume and the number of particles.
The Nature of Science and Engineering	3. Interactions Among Science, Technology, Engineering, Mathematics, and Society	3. Developments in physics affect society and societal concerns affect the field of physics.	9P.1.3.3.1	Describe changes in society that have resulted from significant discoveries and advances in technology in physics. <i>For example:</i> Transistors, generators, radio/television, or microwave ovens.
		4. Physical and mathematical models are used to describe physical systems.	9P.1.3.4.1	Use significant figures and an understanding of accuracy and precision in scientific measurements to determine and express the uncertainty of a result.
Physical Science	2. Motion	1. Forces and inertia determine the motion of objects.	9P.2.2.1.1	Use vectors and free-body diagrams to describe force, position, velocity and acceleration of objects in two-dimensional space.
			9P.2.2.1.2	Apply Newton's three laws of motion to calculate and analyze the effect of forces and momentum on motion.
			9P.2.2.1.3	Use gravitational force to explain the motion of objects near Earth and in the universe.
		2. When objects change their motion or interact with other objects in the absence of frictional forces, the total amount of mechanical energy remains constant.	9P.2.2.2.1	Explain and calculate the work, power, potential energy and kinetic energy involved in objects moving under the influence of gravity and other mechanical forces.
			9P.2.2.2.2	Describe and calculate the change in velocity for objects when forces are applied perpendicular to the direction of motion. <i>For example:</i> Objects in orbit.
			9P.2.2.2.3	Use conservation of momentum and conservation of energy to

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				analyze an elastic collision of two solid objects in one-dimensional motion.	
	3. Energy	1. Sound waves are generated from mechanical oscillations of objects and travel through a medium.	9P.2.3.1.1	Analyze the frequency, period and amplitude of an oscillatory system. <i>For example:</i> An ideal pendulum, a vibrating string, or a vibrating spring-and-mass system.	
			9P.2.3.1.2	Describe how vibration of physical objects sets up transverse and/or longitudinal waves in gases, liquids and solid materials.	
			9P.2.3.1.3	Explain how interference, resonance, refraction and reflection affect sound waves.	
			9P.2.3.1.4	Describe the Doppler effect changes that occur in an observed sound as a result of the motion of a source of the sound relative to a receiver.	
Physical Science	3. Energy	2. Electrons respond to electric fields and voltages by moving through electrical circuits and this motion generates magnetic fields.	9P.2.3.2.1	Explain why currents flow when free charges are placed in an electric field, and how that forms the basis for electric circuits.	
			9P.2.3.2.2	Explain and calculate the relationship of current, voltage, resistance and power in series and parallel circuits. <i>For example:</i> Determine the voltage between two points in a series circuit with two resistors.	
			9P.2.3.2.3	Describe how moving electric charges produce magnetic forces and moving magnets produce electric forces.	
			9P.2.3.2.4	Use the interplay of electric and magnetic forces to explain how motors, generators, and transformers work.	
			3. Magnetic and electric fields interact to produce electromagnetic waves.	9P.2.3.3.1	Describe the nature of the magnetic and electric fields in a propagating electromagnetic wave.
				9P.2.3.3.2	Explain and calculate how the speed of light and its wavelength change when the medium changes.
				9P.2.3.3.3	Explain the refraction and/or total internal reflection of light in transparent media, such as lenses and optical fibers.
				9P.2.3.3.4	Use properties of light, including reflection, refraction, interference, Doppler effect and the photoelectric effect, to explain phenomena and describe applications.
				9P.2.3.3.5	Compare the wave model and particle model in explaining properties of light.
				9P.2.3.3.6	Compare the wavelength, frequency and energy of waves in different regions of the electromagnetic spectrum and describe their

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			applications.
	4. Heat energy is transferred between objects or regions that are at different temperatures by the processes of convection, conduction and radiation.	9P.2.3.4.1	Describe and calculate the quantity of heat transferred between solids and/or liquids, using specific heat, mass and change in temperature.
		9P.2.3.4.2	Explain the role of gravity, pressure and density in the convection of heat by a fluid.
		9P.2.3.4.3	Compare the rate at which objects at different temperatures will transfer thermal energy by electromagnetic radiation.

SOCIAL STUDIES

Strand	Sub-Strand	Standards	Benchmarks	Examples
U.S. History	A. Indigenous People of North America	The student will demonstrate knowledge of indigenous cultures in North America prior to and during western exploration.	1. Students will identify important cultural aspects and regional variations of major North American Indian nations.	1. Language groups; Mayan and Aztec architecture; regional variations of Indian agriculture, shelter forms, political organization, religion
	B. Three Worlds Converge, 1450-1763	The student will understand how European exploration and colonization resulted in cultural and ecological interactions among previously unconnected peoples.	1. Students will identify the stages and motives of European oceanic and overland exploration from the 15 th to the 17 th centuries. 2. Students will describe the consequences of early interactions between Europeans and American Indian nations. 3. Students will describe key characteristics of West African kingdoms and the development of the Atlantic slave trade.	1. Routes taken by European explorers around Africa, to the Americas, and across the Pacific, exploitation of resources, religious conflict and missions. 2. Exchange of plants, animals, and pathogens; the impact of epidemic disease, political alliances, trade, religious conversion, treaties 3. Songhai, Saharan trade routes, Portuguese slave traders, rise of sugar plantations
	C. Three Worlds Converge, 1450-1763	The student will understand the economic development of the English colonies in North America and the exploitation of enslaved Africans.	1. Students will describe and evaluate the enslavement of Africans, the Middle Passage and the use of slave labor in European colonies.	1. Compare slavery in North America and the Caribbean, workings of the slave trade, plantation life
	D. Revolution and the New Nation, 1763-1820	The student will demonstrate knowledge of the causes, course, and consequences of	1. Students will analyze the major economic, political, and philosophical conflicts leading to the American Revolution including the roles of the	1. Consequences of Seven Years' War and the Treaty of Paris; resulting changes in English imperial policy and growth of colonial resistance; shift in governing authority to

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		<p>the American Revolution.</p>	<p>First and Second Continental Congresses and the Declaration of Independence.</p> <p>2. Students will explain how and why the Americans won the war against superior British resources, analyzing the role of key leaders, major campaigns and events, and participation by ordinary soldiers and civilians.</p> <p>3. Students will explain the impact of the Revolutionary War on groups within American society, including loyalists, patriots, women and men, Euro-Americans, enslaved and free African Americans, and American Indians.</p>	<p>colonies; political ideas of Locke, Montesquieu, and others; Stamp Act crisis; arguments for and against independence, including loyalist perspectives; Sons of Liberty, consumer boycotts, crowd actions, petitions to Parliament, Boston Tea Party; Boston Massacre, Committees of Correspondence, writings of Tom Paine and Patrick Henry; Lexington and Concord.</p> <p>2. Colonial militias, Continental Army; Washington, Samuel Adams, John Adams, Revere, Jefferson, Von Steuben, Cornwallis, Lafayette; Battles of Trenton, Saratoga, Yorktown; U.S. relations with France, Holland and Spain; split in the Iroquois Confederacy; Treaty of Paris</p> <p>3. Debates over slavery, manumission, and status of free blacks and women; loyalist migration to Canada; treaties of Fort Stanwix (Iroquois) and Hopewell (Cherokee); westward movement of white settlers</p>
	<p>E. Revolution and the New Nation, 1763-1820</p>	<p>The student will understand the foundation of the American government and nation .</p>	<p>1. Students will identify and explain the basic principles that were set forth in the documents that declared the nation’s independence (the Declaration of Independence, inalienable rights and self-evident truths) and that established the new nation’s government (the Constitution).</p> <p>2. Students will describe and evaluate the major achievements and problems of the Confederation period, and analyze the debates over the Articles of Confederation and the revision of governmental institutions that created the U.S. Constitution and the Bill of Rights, and the interpretive function of the Supreme Court.</p> <p>3. Students will describe and explain the emergence of the first American party</p>	<p>1. Equality, “life, liberty, and the pursuit of happiness,” rule of law, government based on consent, republic, balance of powers, federation</p> <p>2. The provisions of the Articles of Confederation, Northwest Ordinance; disposal of western lands, foreign relations and trade, Shays’ Rebellion, Constitutional Convention; alternative plans and compromises in drafting and approving the Constitution; Federalist and Anti-Federalist arguments; arguments about the necessity of a Bill of Rights and James Madison’s role in its adoption; John Marshall’s role in defining the function and power of the Supreme Court; pivotal cases such as <i>Marbury v. Madison</i> and <i>McCullough v. Maryland</i></p> <p>3. Issues and ideas prompting Thomas Jefferson to form opposition party; Federalists vs. Republicans; Alien & Sedition</p>

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			system.	Acts; roles of Washington, John Adams, Alexander Hamilton, Aaron Burr, James Madison; impact of French Revolution
	F. Expansion, Innovation, and Reform, 1801-1861	The student will demonstrate knowledge of the early republic and how territorial expansion affected foreign relations.	<ol style="list-style-type: none"> 1. Students will describe the causes and analyze the effects of the Louisiana Purchase, the War of 1812, and the Monroe Doctrine. 2. Students will analyze the impact of territorial expansion on American Indian nations and the evolution of federal and state Indian policies. 3. Students will analyze the causes and consequences of U.S. geographic expansion to the Pacific, including the concept of Manifest Destiny and the Mexican-American War. 	<ol style="list-style-type: none"> 1. Negotiations with Napoleon and arguments for and against Louisiana Purchase; Lewis and Clark, role of Sacajewea, responses of the Jefferson and Madison administrations to English, French, and Barbary actions against U.S. shipping and sailors; embargo; military campaigns of War of 1812; conflicts between American Indians and white settlers in the Old Northwest, Tecumseh; provisions and influence of Monroe Doctrine 2. Treaty negotiations and land cessions, assimilation policies, war; Indian Removal Act of 1830, establishment of reservation system, tribal sovereignty; role of Andrew Jackson; the forced relocation of American Indians 3. Diplomatic resolution of territorial competition with Britain and Russia in the Pacific Northwest; Texas War for Independence, Alamo, and debates over annexation; causes and course of war with Mexico; Treaty of Guadalupe Hidalgo and conquest of the Southwest
	G. Expansion, Innovation, and Reform, 1801-1861	The student will understand how explosive growth (economic, demographic, geographic) and technological innovation transformed American society.	<ol style="list-style-type: none"> 1. Students will describe and analyze the impact of innovations in industry, technology and transportation on life in America. 2. Students will examine demographic growth and patterns of population change and their consequences for American society before the Civil War. 	<ol style="list-style-type: none"> 1. Steam power, canals, railroads, telegraph, cotton gin, printing presses and publishing; photography; Lowell textile mills and factory manufacture; rise of wage labor; economic growth and boom/bust cycles (Panics of 1819, 1837, 1857); urbanization; spatial separation of residence and workplace 2. Irish, German, Scandinavian immigration, adaptation, assimilation; Chinese contract laborers; ethnic and cultural conflict and nativism; impact on the institution and experience of slavery of the ending of Atlantic slave trade, the cotton boom, the annexation of Mexican territory, and the

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				forced relocation of enslaved African Americans; California Gold Rush; Oregon, Santa Fe, and Mormon Trails
Strand	Sub-Strand	Standard	No.	Benchmarks
U.S. History	H. Expansion, Innovation, and Reform, 1801-1861	The student will understand the sources, characteristics, and effects of antebellum reform movements.	1. Students will understand the sources, characteristics and effects of cultural, religious and social reform movements, including the abolition, temperance, and women's rights movements.	1. The Second Great Awakening; Millennialism, evangelical revivals and camp meetings; Underground Railroad, Frederick Douglass, William Lloyd Garrison, Angelina and Sarah Grimke, David Walker, Sojourner Truth, Harriet Tubman; 1848 Seneca Falls Convention and Declaration of Sentiments, Lucretia Mott, Elizabeth Cady Stanton, Susan B. Anthony; Horace Mann, Noah Webster, and public education; General Trades Unions, Ten-Hour Movement; utopian experiments such as New Harmony, Shakers, Mormons; Transcendentalism and the American Renaissance, Ralph Waldo Emerson, Henry David Thoreau, Margaret Fuller
		The student will understand the extension, restriction, and reorganization of political democracy after 1800.	1. Students will describe and analyze changes in American political life including the spread of universal white male suffrage, restrictions on free African Americans, and the emergence of the Second Party System.	1. The election of Jefferson in the "Revolution of 1800"; Andrew Jackson and the "Age of the Common Man"; emergence of the national Democratic and Whig parties; nativism and "Know-Nothing" party; Workingmen's Parties; voter participation and campaigning, rise of interest-group politics and petition campaigns

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	I. Civil War and Reconstruction, 1850-1877	The student will demonstrate knowledge of the long- and short-term causes of the Civil War	<ol style="list-style-type: none"> Students will identify and explain the economic, social, and cultural differences between the North and the South. Students will understand and analyze the political impact of debates over slavery and growing sectional polarization in key events including the Missouri Compromise, the Compromise of 1850 and the Fugitive Slave Law, the rise of the Republican party, the Southern secession movement and the formation of the Confederacy. 	<ol style="list-style-type: none"> Sectional differentiation in industrial development, urbanization, agricultural systems, demographic characteristics Nullification Crisis (impact of tariff policy on issue of states' rights and sectional differences), Nat Turner's rebellion, debates over "free labor" and proslavery ideologies, annexation of Texas and Mexican territory, Lincoln-Douglas debates, breakdown of Second Party System, <i>Dred Scott</i> decision, <i>Uncle Tom's Cabin</i>, Bleeding Kansas, John Brown's raid, presidential election of 1860; Henry Clay, John C. Calhoun
Strand	Sub-Strand	Standard	No.	Benchmarks
U.S. History	I. Civil War and Reconstruction, 1850-1877	The student will understand the course, character, and outcome of the Civil War.	<ol style="list-style-type: none"> Students will identify events and leaders of the war, and analyze how the differences in resources of the Union and Confederacy (economy, technology, demography, geography, political and military leadership) affected the course of the war and Union victory. Students will describe and explain the social experience of the war on battlefield and home front, in the Union and the Confederacy. Students will analyze the significance of Lincoln's Gettysburg Address and its views of American political life. 	<ol style="list-style-type: none"> Fort Sumter, Manassas/Bull Run, Gettysburg, Vicksburg, Appomattox; Emancipation Proclamation; Union industrial capacity, "total war" strategy, rifles, earthworks, blockades; Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, William T. Sherman, Robert E. Lee, Stonewall Jackson,. Confederate soldiers, Union soldiers, African American military units, immigrant military units, contrabands, northern race riots, draft riots, southern food riots, women's home front efforts, U.S. Sanitary Commission, Cherokee participation with Confederacy
		The student will demonstrate knowledge of the consequences of Civil War and Reconstruction.	<ol style="list-style-type: none"> Students will describe the content of and reasons for the different phases of Reconstruction, and analyze their successes and failures in transforming social and race relations. Students will understand and explain the political impact of the war and its 	<ol style="list-style-type: none"> Union occupation, African Americans' efforts for economic and political improvements, Freedmen's Bureau, Presidential Reconstruction, Radical Reconstruction, "redemption" and the reemergence of white supremacy in the South, rise of the Ku Klux Klan

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			<p>aftermath in Reconstruction, including emancipation and the redefinition of freedom and citizenship, expansion of the federal bureaucracy; expansion of federal authority and its impact on states' rights.</p>	<p>2. Emancipation Proclamation, Gettysburg Address, curbs on wartime civil liberties; issues of citizenship, enfranchisement, political participation; 13th, 14th, and 15th Amendments to the Constitution, debates over them, and interpretations of them by the Supreme Court</p>
	<p>J. Reshaping the Nation and the Emergence of Modern America, 1877-1916</p>	<p>The student will analyze the process of westward expansion in the late 19th century.</p>	<p>1. Students will demonstrate knowledge of the effects of post-Civil War westward expansion including the resulting conflicts with American Indian nations.</p>	<p>1. Transcontinental railroad, Morrill Land Act, Plains Indian Wars, Dawes Act of 1887, Wounded Knee, Carlisle Indian Industrial School, White Earth reservation, industrial mining in the southwest and Midwest (Iron Range)</p>
		<p>The student will describe and analyze the linked processes of industrialization and urbanization after 1870.</p>	<p>1. Students will demonstrate knowledge about how the rise of corporations, heavy industry, and mechanized farming transformed the American economy, including the role of key inventions and the growth of national markets. 2. Students will demonstrate knowledge of the rapid growth of cities and the transformation of urban life, including the impact of migration from farms and new technologies, the development of urban political machines, and their role in financing, governing, and policing cities.</p>	<p>1. The Bessemer Steel Process and barbed wire; business leaders such as James J. Hill, John Deere, J.P. Morgan, John J. Rockefeller, and Andrew Carnegie; impact of railroads, agricultural productivity and mechanized farming, factories; new forms of marketing and advertising, trusts; Mark Twain, Ashcan school of painting, Stephen Crane; Sears catalog 2. Street lights and trolley cars, the Tweed Ring; the new middle class Victorian culture; architecture and literature</p>
<p>U.S. History</p>	<p>J. Reshaping the Nation and the Emergence of Modern America, 1877-1916</p>	<p>The student will demonstrate knowledge of the causes and consequences of immigration to the United States from 1870 to the First World War.</p>	<p>1. Students will demonstrate knowledge of the massive wave of "New" immigration after 1870, its differences from the "Old" immigration, and its impact on new social patterns, conflicts, and ideas of national unity.</p>	<p>1. Ellis Island; Angel Island; ethnic enclaves; "Melting Pot" idea, 1882 Chinese Exclusion Act</p>
		<p>The student will understand the origins of racial segregation.</p>	<p>1. Students will demonstrate knowledge of the imposition of racial segregation, African American disfranchisement, and growth of racial violence in the post-reconstruction South, the rise of</p>	<p>1. "Scientific" theories of race in the late 19th Century; "Jim Crow" laws in southern states; Poll Tax, literacy test, Grandfather Clause; founding of the Ku Klux Klan; Ida B. Wells-Barnett, W.E. B. DuBois, Booker T.</p>

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			“scientific racism,” and the debates among African-Americans about how best to work for racial equality.	Washington, <i>Plessey v. Ferguson</i> ; anti-Chinese movement in the west and the rise of lynching in the south
		The student will describe how industrialization changed nature of work and the origins and role of labor unions in the 1870s, 1880s, and 1890s.	1. Students will demonstrate knowledge about how the rise of industry changed the nature of work in factories, the origins of labor unions, and the role of state and federal governments in labor conflicts.	1. The shift from workshop to factory; Knights of Labor, Samuel Gompers and the American Federation of Labor; Railroad Strike of 1877; Homestead; Haymarket bombing 1886; 8 work hour day; Pullman strike 1894
		The student will understand the changing dynamics of national politics in the late 19 th century.	1. Students will demonstrate knowledge about the ways the American people responded to social, economic, and political changes through electoral politics and social movements such as populism and temperance.	1. Monetary policy; Greenbacks, Gold Standard, tariffs; Depressions of 1873-79 and 1893-97, Farmer’s Alliance, Grange movement, Populist Party, Omaha Platform of 1892, 1896 election, free silver, William McKinley, William Jennings Bryan, Eugene V. Debs, Frances Willard and the Women’s Christian Temperance Union (WCTU), Elizabeth Cady Stanton, Susan B. Anthony, National American Woman Suffrage Association, women’s suffrage (19 th Amendment)
U.S. History	J. Reshaping the Nation and the Emergence of Modern America, 1877-1916	The student will understand the causes and consequences of American expansionism and the Spanish-American War.	1. Students will examine the causes of the Spanish-American war and analyze its effects on foreign policy, national identity, and the debate over the new role of America as a growing power in the Pacific and Latin America.	1. Hawaii; Alfred Thayer Mahan’s theory about the importance of controlling the seas; Cuba; Filipino insurrection; Puerto Rico; Admiral Dewey; Roosevelt Corollary to the Monroe Doctrine; Yellow Press; William R. Hearst, intervention in the Boxer Rebellion
	K. The Emergence of Modern America, 1890-1930	The student will analyze the wide range of reform efforts known as Progressivism between 1890 and the First World War.	1. Students will demonstrate knowledge of how Progressives addressed problems of industrial capitalism, urbanization, and political corruption. 2. Students will analyze the debates about woman suffrage and demonstrate knowledge of the successful campaign that led to the adoption of the 19 th Amendment granting women the right to vote.	1. Jane Addams and the settlement house; Florence Kelley; Upton Sinclair and muckrakers, Ida Tarbell; Conservation, “planned use,” and the origins of the national forest service; Preservationism (Yellowstone National Park, 1890; Sierra Club 1892); Robert Lafollette; city manager system; civil service reform; initiative and referendum; Progressive Party and Theodore Roosevelt; Woodrow Wilson’s “New Freedom”; income tax (16 th Amendment); Sherman Antitrust Act, direct election of senators (17 th

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				Amendment) 2. National American Woman Suffrage Association, Carrie Chapman Catt and the 'winning plan"; The Woman's Party, Alice Paul
		The student will understand the causes and consequences of World War I.	1. Students will analyze the causes of World War I and identify key people, major events, and the war's impact on American foreign and domestic policy.	1. Isolationism, Gentleman's Agreement; Neutrality; Woodrow Wilson's 14 Points; Submarine warfare and the Lusitania; Zimmerman telegram, Selective Service Act, German American loyalty tests, Alvin York, Sussex Pledge; Russian Revolution; Versailles Treaty
		The student will understand how the United States changed politically, culturally, and economically from the end of World War I to the eve of the Great Depression.	1. Students will analyze how developments in industrialization, transportation, communication, and urban mass culture changed American life. 2. Students will describe key social changes related to immigration, social policy, and race relations. 3. Students will examine the changing role of art, literature and music in the 1920s and 30s.	1. Scientific Management, assembly lines, Henry Ford, Thomas Edison; radio and movies 2. Red Scare; Normalcy; National Origins Act, 1924; Ku Klux Klan; Garveyism; Prohibition; Scopes Trial; African American migration to the North, American Indian reform, and Mexican immigration 3. Jazz Age, the "lost generation," F. Scott Fitzgerald, Ernest Hemingway, Sinclair Lewis, Gertrude Stein, Louis Armstrong, Edward Hopper; Harlem Renaissance
U.S. History	L. The Great Depression and World War II, 1929-1945	The student will understand the origins and impact of Great Depression and the New Deal, 1929-1940.	1. Students will demonstrate knowledge of the causes of the Great Depression and how it affected Americans in all walks of life. 2. Students will demonstrate knowledge of how the New Deal addressed the Great Depression and transformed American federalism.	1. Economic policies of Harding and Coolidge administrations; stock market crash 1929; President Herbert Hoover, Reconstruction Finance Corporation; Dust Bowl, Okies; urban and rural family life in the Depression 2. Franklin Roosevelt, Eleanor Roosevelt; First New Deal (NRA); Second New Deal; Social Security Act, Wagner Act, TVA; Indian New Deal; Federal Reserve; CIO, sit-down strikes; Court Packing; Frances Perkins
	M. The Great Depression and World War II, 1929-1945	The student will understand the origins of World War II, the course of the war, and the impact of the war on American society.	1. Students will demonstrate knowledge of the international background of World War II and the debates over American involvement in the conflict. 2. Students will demonstrate knowledge of key leaders and events of World	1. Treaty of Versailles, Hitler, Mussolini and the rise of fascism in Germany and Italy; breakdown of the League of Nations; Good Neighbor Policy; Isolationism; Japanese militarism, Lend Lease; Pearl Harbor 2. European Theater: Battle of Britain, the

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			<p>War II and how the Allies prevailed.</p> <p>3. Students will describe the impact of the war on people such as women, African Americans and Japanese Americans.</p>	<p>“second front,” Normandy Invasion; Holocaust and the Nuremberg Trials; Pacific Theater: Battle of Midway, Okinawa and the Philippines; The Big Three: Roosevelt, Churchill, Stalin; Yalta; Harry Truman; Hiroshima and Nagasaki; United Nations</p> <p>3. Japanese internment; women in the workplace, “Rosie the Riveter,” Roosevelt’s Fair Employment Executive Order, the Bracero Program, and African Americans in labor force</p>
	N. Post-War United States, 1945-1972	The student will understand the social and economic changes in the United States, 1945-1960	<p>1. Students will demonstrate knowledge of social transformation in post-war United States.</p> <p>2. Students will understand the post-war economic boom and its impact on demographic patterns, role of labor, and multinational corporations.</p>	<p>1. Sputnik and education reform, mass media (TV and movies); beatniks; integration of the military; school desegregation, Betty Friedan</p> <p>2. Demobilization and economic reconversion; GI Bill; baby boom, suburbanization; growth of the middle class; Coca Cola, Inc., Teamsters</p>
Strand	Sub-Strand	Standard	No.	Benchmarks
U.S. History	N. Post-War United States, 1945-1972	The student will understand the Cold War, its causes, consequences and its military conflicts.	<p>1. Students will demonstrate knowledge of key events of the Cold War and the causes and consequences of the Korean War.</p> <p>2. Students will analyze America’s involvement in the Vietnam War.</p>	<p>1. Iron Curtain; Truman Doctrine; Marshall Plan; Chinese Revolution 1949; United Nations; Containment; Korean Conflict; Suez Crisis; Hungarian uprising 1956; Mutually assured destruction; Berlin Wall; Berlin airlift, Third World: Cold War politics in Africa, Asia, the Caribbean and the Middle East; Cuban Revolution 1959; Cuban Missile Crisis</p> <p>2. Gulf of Tonkin Resolution, 1964; Domino Theory; Tet Offensive; bombing campaigns in Laos and Cambodia; Paris Peace Accord, 1973; dissent: draft resisters, Vietnam Vets Against the War, media</p>
		The student will understand the key domestic political issues and debates in the postwar era to 1972.	<p>1. Students will demonstrate knowledge of the domestic policies and civil rights issues of the Truman and Eisenhower administrations.</p> <p>2. Students will analyze provisions of</p>	<p>1. Fair Deal; McCarthyism; Modern Republicanism; Military-Industrial Complex, <i>Brown v. Board of Education</i>; Montgomery Bus Boycott; Martin Luther King, Jr. and Non-Violence; Little Rock</p>

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			<p>Kennedy’s New Frontier and Johnson’s Great Society.</p> <p>3. Students will analyze the impact of the foreign and domestic policies of Nixon.</p>	<p>2. Space race, Civil Rights Act, 1964; Voting Rights Act, 1965; War on Poverty; Immigration Reform Act, 1965</p> <p>3. Environmental Protection Agency, 1970; Watergate, Détente, Nixon’s visit to China</p>
		<p>The student will understand the changes in legal definitions of individual rights in the 1960s and 1970s and the social movements that prompted them.</p>	<p>1. Students will demonstrate knowledge of the “rights revolution” including the civil rights movement, women’s rights movements, expansion of civil liberties, and environmental and consumer protection.</p>	<p>1. Thurgood Marshall and the NAACP; sit-ins; Freedom Rides; Martin Luther King, Jr., Malcolm X; Fannie Lou Hamer, Mississippi Freedom Democratic Party; race riots (Detroit, Los Angeles, Washington, Minneapolis); Ralph Nader; <i>Gideon v. Wainwright</i>; <i>Miranda v. Arizona</i>; Rachel Carson, <i>Silent Spring</i>; Earth Day, 4/22/70; Clean Air Act; American Indian Movement; Equal Rights Amendment; Phyllis Schlafley; Title VII, Title IX, Equal Credit Act; Affirmative Action; <i>Bakke</i> decision, 1978</p>
	<p>O. Contemporary United States, 1970 to the present</p>	<p>The student will understand the evolution of foreign and domestic policy in the last three decades of the 20th century and the beginning of the 21st century.</p>	<p>1. Students will demonstrate knowledge of the changing domestic and foreign policies in the Ford, Carter, Reagan, George H. W. Bush, and Clinton, George W. Bush administrations.</p> <p>2. Students will demonstrate knowledge of economic, social, and cultural developments in contemporary United States.</p> <p>3. Students will know and describe the political and economic policies that contributed to the collapse of the Soviet Union and the end of the Cold War.</p>	<p>1. Inflation and recession; rise of the New Right; defeat of the ERA; supply side economics; the “Reagan Revolution”; Americans with Disabilities Act, 1990; Violence Against Women Act, 1994; NAFTA, the Patriot Act, Detente, Nixon’s visit to China; Iran Hostage Crisis; national sovereignty; collapse of communism in Eastern Europe and USSR: Glasnost; Iran Contra affair; First Iraq war; 9-11; Afghanistan, Taliban, Osama Bin-Laden; War on Terrorism; second Iraq War</p> <p>2. Inflation, recession; labor force participation of women and minorities; shift to service economy; “culture wars;” computer revolution; information economy; new immigration in the 1970s, 80s, and 90s; terrorism & civil liberties</p> <p>3. Glasnost, Perestroika, Reagan’s “Tear Down This Wall” speech</p>

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World History	A. Beginnings of Human Society and Early Civilizations, to 1000 BC	The student will demonstrate knowledge of the earliest human societies and the processes that led to the emergence of agricultural societies around the world.	<ol style="list-style-type: none"> 1. Students will analyze the biological, cultural, geographic, and environmental processes that gave rise to the earliest human communities. 2. Students will describe innovations that gave rise to developed agriculture and permanent settlements and analyze the impact of these changes. 	<ol style="list-style-type: none"> 1. Fishing, hunting, gathering; nomadic civilizations 2. Stone and wood tools, fire, language, art, agriculture, role of women, pottery, cloth (wool/flax), specialization
		The student will demonstrate knowledge of the major characteristics of civilization and the process of its emergence.	<ol style="list-style-type: none"> 1. Students will locate various civilizations of the era in time and place, and describe, and, Israel compare the cultures of these various civilizations. 2. Students will analyze the spread of agricultural societies, and population movements. 	<ol style="list-style-type: none"> 1. Egyptian, Mesopotamian, Indus River Valley, Shang Dynasty, Babylonian, Assyrian, Minoan 2. Mycenaean, Israel, and various others, Mesopotamia, Egypt, Indus River, China, and the later civilizations of the Middle East, including ancient Israel
World History	B. World Civilizations and Religions, 1000 BC - 500 AD	The student will demonstrate knowledge of ancient civilizations in South and East Asia.	1. Students will locate various civilizations of the era in India, China, Korea and Japan, and describe their structures and interactions.	Aryan civilization, Mohenjo-daro, Ashoka, Zhou, Qin and Han dynasties, Yamato, Vedas, Hinduism, Buddha, Buddhism, caste system, Confucius, Confucianism, Laozi, Daoism, precursors to the Great Wall; cultural universals of economic, political, social, religious, philosophical, and technological characteristics
		The student will demonstrate knowledge of ancient African civilizations.	1. Students will locate various African civilizations and describe their structures and ways of living.	Africa: Kush, Meroe, use of iron, ocean-going trade
		The student will demonstrate knowledge of ancient Mesoamerican and South American civilizations.	1. Students will locate various Mesoamerican and South American civilizations and describe their structures and ways of living.	Mesoamerica: Olmecs, Maya, maize cultivation, astronomy and calendars, glyphic writing, monumental building; South America: Chavin, Moche, Nazca; gold, pottery and textiles; monumental building

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		<p>The student will demonstrate knowledge of ancient Greek civilization and its influence throughout Eurasia, Africa and the Mediterranean.</p>	<ol style="list-style-type: none"> 1. Students will analyze the influence of geography on Greek economic, social, and political development, and compare the social and political structure of the Greek city-states with other contemporary civilizations. 2. Students will analyze the influence of Greek civilization beyond the Aegean including the conflicts with the Persian empire, contacts with Egypt and South Asia, and the spread of Hellenistic culture throughout the Mediterranean. 	<ol style="list-style-type: none"> 1. Mediterranean Sea, mountain barriers, coastal colonies, Black Sea, Trojan War, role of slavery, significance of citizenship, democracy, Solon, Lycurgus 2. Marathon, Salamis, Platea, Thermopylae, Persian and Peloponnesian Wars, Alexander the Great, Greek drama, philosophy, poetry, history, sculpture, architecture, science, mathematics, politics and ethics, Plato, Socrates, Aristotle, Philip II, Euclid, Eratosthenes, Ptolemy, Hippocrates, Zeno
		<p>The student will demonstrate knowledge of ancient Rome from about 500 BC - 500 AD and its influence in relation to other contemporary civilizations.</p>	<ol style="list-style-type: none"> 1. Students will analyze the influence of geography on Roman economic, social and political development, and compare its social and political structure to other contemporary civilizations. 2. Students will compare Roman military conquests and empire building with those of other contemporary civilizations. 3. Students will analyze the influence of Roman civilization, including the contacts and conflicts with it and other peoples and civilizations in Eurasia, Africa and the Near East. 4. Students will compare the disintegration of the Western Roman Empire with the fate of other contemporary empires. 	<ol style="list-style-type: none"> 1. Geographic location, Etruscans Patricians, Plebeians, freedmen, slaves, law, Senate, army, state 2. Marius, Sulla, Cicero, Julius and Augustus Caesar, Livia, Cleopatra, Bouddica, Punic Wars, Great Jewish War, Constantine 3. Hellenism, Latin, Art and architecture, engineering and science, medicine, literature and history, language, religious institutions, and law. Roman interactions with Hispania, Carthage, Gaul, Egypt, the Germanic peoples of Europe 4. Migration, cultural assimilation and conflict, religious tensions, population decline, tax problems, over-extended empire, greed and corruption, mercenary army
World History	C. World Civilizations and Religions, 1500 BC - 700 AD	<p>The student will demonstrate knowledge of the history and rise of major world religions.</p>	<ol style="list-style-type: none"> 1. Students will understand the history, geographic locations, and characteristics of major world religions, including Judaism, Hinduism, Buddhism, Confucianism, Christianity, Islam, as well as indigenous religious traditions. 	

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	<p>D. Early Medieval & Byzantium, 400 AD - 1000 AD</p>	<p>The student will demonstrate knowledge of the Byzantine Empire.</p>	<ol style="list-style-type: none"> 1. Students will describe the events leading to the establishment of Constantinople as the capital of the Eastern Roman Empire and analyze the significance of this event. 2. Students will describe Byzantine culture and examine disputes and why they led to the split between Eastern and Western Christianity. 	<ol style="list-style-type: none"> 1. Byzantium, Constantine 2. Architecture, Hagia Sophia, Christian Orthodoxy, Icons
		<p>The student will demonstrate knowledge of Europe during the Middle Ages from about 500 - 1000 AD in terms of its impact on Western civilization.</p>	<ol style="list-style-type: none"> 1. Students will describe the spread and influence of Christianity throughout Europe and analyze its impact. 2. Students will explain the structure of feudal society and analyze how it impacted all aspects of feudal life. 	<ol style="list-style-type: none"> 1. Catholic Church, monasticism, schism 2. Vassals, Fiefs, Manor Serf, Knight, Investiture, Lords, homage, Frankish kings, and Age of Charlemagne
<p>World History</p>	<p>E. Global Encounters, Exchanges, and Conflicts, 500 AD -1500 AD</p>	<p>The student will demonstrate knowledge of Islamic civilization from about 600 - 1000 AD.</p>	<ol style="list-style-type: none"> 1. Students will identify historical turning points that affected the spread and influence of Islamic civilization, including disputes that led to the split between Sunnis and Shi'ah (Shi'ites). 2. Student will explain significant features of the Islamic culture during this period. 	<ol style="list-style-type: none"> 1. The Caliphate, Battle of Tours, Conquest of Spain, Slave soldiers 2. Science, literature, architecture, schools of law
		<p>The student will demonstrate knowledge of civilizations and empires of the Eastern Hemisphere and their interactions through regional trade patterns.</p>	<ol style="list-style-type: none"> 1. Students will describe the influence of geography on the cultural and economic development of Japan, China, Southeast Asia and India. 2. Students will describe the influence of geography on the cultural and economic development of the African kingdoms of Ghana, Mali and Songhai. 	<ol style="list-style-type: none"> 1. Sui dynasty, Tang dynasty, Nara, Heian, Silla, , Samurai, bushido, shogun, Shinto, Genghis Khan, Kublai Khan, Song, Ming, Delhi Sultanate, Tamerlane, Sikhs, Khmer kingdom, Pagan in Burma, Majapahit on Java, Angkor Wat, Mahayana Buddhism, Theravada Buddhism, Tale of Genji; Silk Road, Marco Polo 2. Kush, King Ezana, Swahili, Ibn Battuta, gold/salt economy, slavery, Mansa Musa, Great Zimbabwe, Axum, Bantu migrations, Sahara salt caravans, Timbuktu

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World History	E. Global Encounters, Exchanges, and Conflicts, 500 AD - 1500 AD	The student will demonstrate knowledge of the interactions between Christendom and the Islamic world, 750 - 1500 AD.	<ol style="list-style-type: none"> 1. Students will describe the emergence of European states of Christendom and analyze the conflicts among them and other Eurasian powers. 2. Students will describe the emergence of Islamic states in Africa, the Near East, Iberia and India, and analyze the conflicts among them and other Eurasian powers. 3. Students will analyze the clashes between Christendom, Islam, and other peoples and polities. 4. Students will analyze the emergence of the Ottoman Empire and its implications for Christendom, the Islamic World, and other polities. 	<ol style="list-style-type: none"> 1. England, France, Spain and Russia, Battle of Tours, Charlemagne, William the Conqueror, Peter Abelard, Heloise, 100 Years War, Joan of Arc, Mongol conquests, Constantinople & the Turks 2. The Arab caliphates, the Mughals in India, Islamic states in the Indian ocean, the Moors in Iberia, Arab learning, trade and migration within the Islamic world 3. The Islamic conquest of Jerusalem, <i>jihad</i> and Islam, the European Crusades, Jews in Christendom and the Islamic world, Muslim conflicts with Hindus in India, heresies in Europe, the inquisition, the Spanish “<i>reconquista</i>” 4. The Byzantine Empire, Orthodox Christianity, Constantinople, Istanbul, the Battle of Lepanto, Russia and Austria-Hungary, Greek and Latin learning in Christendom and the Islamic World, the Byzantine diaspora, Venice, Italy, the Balkan Peninsula, the Middle East and Asia
		The student will demonstrate a knowledge of overseas trade, exploration, and expansion in the Mediterranean, Indian, and Atlantic Oceans, 1000-1500 AD.	<ol style="list-style-type: none"> 1. Students will compare the Indian Ocean region with the Mediterranean Sea region in terms of economic, political, and cultural interactions, and analyze the nature of their interactions after 1250 CE. 2. Students will compare Chinese exploration and expansion in the Indian Ocean and East Africa with European exploration and expansion in the Atlantic Ocean and West Africa. 3. Students will analyze the economic, political, and cultural impact of maritime exploration and expansion. 	<ol style="list-style-type: none"> 1. The Levant, spice trade, silks, Indian ocean trade networks, Venice, Genoa, and Italian trade with the East, in-land trade networks in Europe and Asia, the Silk Road, the Low Countries and Italy, banking and finance in Europe and Asia, the Fugger’s and Medici 2. Voyages of Zheng He, Prince Henry the Navigator, navigation science, ship technology, piracy, colonialism, cartography, slavery, commerce 3. Artistic interactions (i.e., the non-European in European art), Arab learning in Christendom and elsewhere, the spread and influence of Classical Arab, Chinese, Greek, and Latin civilization, scientific and technological exchanges (i.e., algebra, gunpowder, paper, the compass, etc.)

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World History	E. Global Encounters, Exchanges, and Conflicts, 500 AD -1500 AD	The student will demonstrate knowledge of complex societies and civilizations in the Americas.	<ol style="list-style-type: none"> 1. Students will compare the emergence, expansion and structures of Mayan, Incan, and Aztec civilizations. 2. Students will analyze patterns of long distance trade centered in Mesoamerica. 	<ol style="list-style-type: none"> 1. Yucatan Peninsula, Mayan mathematics (the use of zero), astronomy, and calendar making; the Mayan city states; commerce, agriculture, pottery and textiles, civil war and relations with other Mesoamerican peoples; Chichen Itza and Uxmal; Aztec migration from North; Tenochtitlan, Triple Alliance, poetry, gold, silver, pottery, textiles, maize cultivation, chinampas (“floating gardens”), religion, law, bureaucracy, Aztec monarchy versus Mayan city-states, glyphic writing; limits to expansion such as Tlaxcala. Cuzco, Pachacuti; Huayna Capac, solar religion, gender complementarity; mathematics, astronomy, engineering, terraced agriculture; camelid herding; textiles, <i>quipu</i> record keeping; bureaucracy 2. Aztec expansion and colonization in central Mexico and Central America; Mayan causeways in the Yucatan Peninsula and Central America; trade and cultural exchange between the Andes region, Yucatan, Central America, and Mexico
		The student will demonstrate knowledge of social, economic, and political changes and cultural achievements in the late medieval period.	<ol style="list-style-type: none"> 1. Students will describe the emergence of European states and analyze the impact. 2. Students will explain conflicts among Eurasian powers. 3. Students will identify patterns of crisis and recovery related to the Black Death, and evaluate their impact. 4. Students will explain Greek, Roman, and Arabic influence on Western Europe. 	<ol style="list-style-type: none"> 1. England, France, Spain and Russia, Charlemagne, William the Conqueror, Peter Abelard, Heloise, 100 Years’ War, Joan of Arc 2. Crusades, the Mongol conquests, Constantinople and the Turks 3. Population decline, collapse of feudal economy and political system 4. Role of Arabic and Byzantine civilizations, philosophy, medicine, science

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World History	F. Emergence of a Global Age, 1450 AD - 1800 AD	The student will demonstrate knowledge of economic and political interactions among peoples of Europe, Asia, Africa, and the Americas.	<ol style="list-style-type: none"> 1. Students will explain why European powers were able to extend political control in some world regions and not others, in the 15th and 16th Centuries. 2. Students will explain the consequences of the exchange of plants, animals, and disease microorganisms in both the Americas and Eurasia. 3. Students will explain the development of a world market of mineral and agricultural commodities. 4. Students will explain the development of the trans-Atlantic African slave trade and its impact on African and American societies. 	<ol style="list-style-type: none"> 1. Compare the interaction between the Spanish and the Aztecs to the Portuguese in India or East Africa 2. Demographic collapse of American Indian populations; introduction of “New World Crops” into European and Chinese diets 3. Development of plantation system for sugar, cotton, tea, spices; New World gold and silver, the fur trade, and European development 4. Slavery in Christian Europe, in Islamic world practices, in the Americas; the Triangle Trade; Middle Passage; organization of plantation labor and slave resistance
		The student will demonstrate knowledge of development leading to the Renaissance and Reformation in Europe in terms of its impact on Western civilization.	<ol style="list-style-type: none"> 1. Students will identify and analyze the economic foundations of the Renaissance. 2. Students will describe the rise of the Italian city-states, identify the role of political leaders, and evaluate the impact. 3. Students will identify individuals and analyze their contributions to the artistic, literary, and philosophical creativity of the period. 4. Students will analyze the short- and long-term effects of the religious, political and economic differences that emerged during the Reformation. 	<ol style="list-style-type: none"> 1. Johann Gutenberg, printing press, growth of cities, destruction of feudal/manoral system, growth of monetary economy, rise of capitalism, commercial revolution 2. Machiavelli, Medicis, Florence, Urbino, Venice, Genoa, Milan 3. Leonardo da Vinci, Michelangelo, Petrarch, Shakespeare, Dante, Erasmus, Durer 4. The views and actions of: Martin Luther, John Calvin; Henry VIII, Elizabeth I, Mary Tudor, and Mary, Queen of Scots inquisition, Thirty Years’ War, Treaty of Westphalia

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World History	F. Emergence of a Global Age, 1450 AD - 1800 AD	The student will demonstrate knowledge of the status and impact of global trade on regional civilizations of the world after 1500 AD.	<ol style="list-style-type: none"> 1. Students will identify and explain the impact of exploration on culture and economies. 2. Students will describe the location and development of the Ottoman Empire. 	<ol style="list-style-type: none"> 1. Spice trade, monopolies, navigation instruments; role of banking, colonial economies 2. 1453 A.D., Mediterranean and Middle East locations, Lepanto, Sulieman
	G. Age of Empires and Revolutions, 1640 - 1920 AD	The student will demonstrate knowledge of the integration of large territories under regional and global empires.	<ol style="list-style-type: none"> 1. Students will examine and analyze how trade- based empires laid the foundation for the global economy. 2. Students will explain the impact of increased global trade on regional economies. 3. Students will analyze the impact of military conflicts among imperial powers on trade and sovereignty. 4. Students will understand and analyze the role of religion as an integrative force in the empires. 5. Students will understand and analyze the interaction between imperial governments and indigenous peoples. 	<ol style="list-style-type: none"> 1. Dutch East India Company, British East India Company 2. East Indian spice trade, Siberian fur trade, China tea trade, African slave trade, growth of London and Amsterdam, development of plantation agriculture, cotton industry in India 3. Ottomans vs. Safavids, British vs. Russian, Dutch vs. Portuguese 4. Christian missions, Shi'ah (Shi'ite) form of Islam in Iran, relations between Islam and Hinduism under the Moguls 5. Russian expansion into Siberia, spread of the Spanish language in the Americas, resettlement policies under the British Empire 6. Mogul Empire in South Asia, Safavid Empire in Iran, Qing Empire in East Asia, Iberian Empires in the Americas and Asia, British, French or Dutch colonial Empires, Russian Empire, Tokugawa Shogunate in Japan.
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World History	G. Age of Empires and Revolutions, 1640 AD - 1920 AD	The student will demonstrate knowledge of scientific, political, philosophical, economic and religious changes during the 17 th and 18 th centuries.	<ol style="list-style-type: none"> 1. Students will describe the Scientific Revolution, its leaders, and evaluate its effects. 2. Students will describe the Age of Absolutism, identify its leaders, and analyze its impact. 3. Students will identify the leaders and analyze the impacts of the English Civil War and the Glorious Revolution on the development of English constitutionalism. 4. Students will explain the ideas of the Enlightenment contrasted with ideas of medieval Europe, and identify important historical figures and their contributions. 5. Students will analyze the causes, conditions and consequences of the French Revolution and compare and contrast it with the American Revolution. 	<ol style="list-style-type: none"> 1. Galileo, Brahe, Newton, conflict with the Church 2. Monarchies of Louis XIV, Frederick the Great, Peter the Great, Catherine the Great 3. Cromwell, Roundheads/Cavaliers, Charles I, rump parliament, Restoration, Charles II, James II, William and Mary 4. Liberty, natural law, scientific method, rationalism, encyclopedia, Montesquieu, Voltaire, Rousseau, Marie-Therese, Locke, Diderot, Adam Smith, Burke 5. Thomas Paine, Thomas Jefferson, Estates, Louis XVI, Marie Antoinette, Bastille, Rights of Man, radicals, Marat, Danton, guillotine, Robespierre, Directory
		The student will demonstrate knowledge of political and philosophical developments in Europe during the 19 th century.	<ol style="list-style-type: none"> 1. Students will analyze the Napoleonic Wars and the Concert of Europe. 2. Students will describe the factors leading to the Revolutions of 1830 and 1848, and describe their long-term impact on the expansion of political rights in Europe. 3. Students will describe major scientific, technological, and philosophical developments of the 19th Century and analyze their impact. 	<ol style="list-style-type: none"> 1. Napoleon, Garibaldi, Bismarck, Congress of Vienna, Metternich, Concordat, Napoleonic Code, Austrlitz, Nelson, Trafalgar, Czar Alexander, Elba, Waterloo 2. Paris uprising, Charles X, Louis Philippe, Conservatism, Liberalism, Radicalism, Great Reform Bill; Socialism, Marxism, Anarchism, Napoleon III, Balkan Problem, Geanne Deroin, Pauline Roland 3. Sigmund Freud, Charles Darwin

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World History	G. Age of Empires and Revolutions, 1640 AD - 1920 AD	The student will demonstrate knowledge of European and American expansion.	<ol style="list-style-type: none"> 1. Students will explain the rise of U.S. influence in the Americas and the Pacific. 2. Students will analyze the motives and consequences of European imperialism in Africa and Asia. 3. Students will compare motives and methods of various forms of colonialism and various colonial powers. 	<ol style="list-style-type: none"> 1. Mexican War of 1846-48; Spanish-American War of 1898; Panama Canal; U.S. actions in Cuba, Philippines, Puerto Rico, Nicaragua, and Haiti 2. Markets, tropical products and raw materials, national rivalries, domestic political aims; British in India and Africa; Dutch in Indonesia; France in North Africa; impact of new weapons and transportation; rise of Japan as a world power; imperialism and the 'scramble' for colonies in Africa; treaty ports, 'unequal treaties' in China 3. Compare French colonization of Algeria to the British in India and the French in Indochina to the British in Hong Kong and China; French and British colonies in sub-Saharan Africa; Japanese and American colonial expansion in Western Pacific
		The student will demonstrate knowledge of the effects of the Industrial Revolution during the 19th century.	<ol style="list-style-type: none"> 1. Students will explain industrial developments and analyze how they brought about urbanization as well as social and environmental changes. 	<ol style="list-style-type: none"> 1. Factory, Entrepreneur, Arkwright, Watt, Hargreaves, Kay, Crompton, Whitney, railroads; coal, iron and cotton industries; industrial cities

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World History	H. Global Conflict, 1914AD - 1945 AD	The student will demonstrate knowledge of the worldwide impact of World War I.	<ol style="list-style-type: none"> 1. Students will analyze the economic and political causes of World War I and how they interacted as well as the impact of technology on the war. 2. Students will examine the Treaty of Versailles and analyze the impact of its consequences. 3. Students will analyze causes and consequences of the Russian Revolution and assess its significance. 4. Students will examine the League of Nations and analyze the reasons for its failure. 5. Students will examine events related to the rise and aggression of dictatorial regimes in the Soviet Union, Germany, Italy and Japan, and the human costs of their actions. 	<ol style="list-style-type: none"> 1. European imperialism, Imperial competition, Great Power rivalries, Balkan nationalism, militarism, mobilization, Alliance System 2. Woodrow Wilson, Fourteen Points, self-determination, reparations, Clemenceau, Lloyd George, demilitarization, League of Nations 3. Nicholas II, Bolsheviks, Mensheviks, Lenin, Trotsky, Kerensky, Rasputin, Soviet, Duma 5. Joseph Stalin, Adolph Hitler, Benito Mussolini, Hirohito and Hideki Tojo, totalitarianism, fascism, Nazism
		The student will demonstrate knowledge of the worldwide impact of World War II.	<ol style="list-style-type: none"> 1. Students will analyze economic and political causes of World War II and examine the role of important individuals during the war and the impact of their leadership. 2. Students will understand and analyze impact of the Holocaust and other examples of genocide in the 20th Century. 3. Students will explain the reasons for the formation of the United Nations. 	<ol style="list-style-type: none"> 1. Great Depression, competition for natural resources, Communism, fascism, Nazism, Hitler, Stalin, Mussolini, Tojo, Hirohito, Churchill, F.D. Roosevelt, Eisenhower, MacArthur, Raoul Wallenberg, Patton, Marshall, Truman, Mao Zedong and Chiang Kai-shek 2. Final Solution, concentration camps, Armenian, Balkans, Nanking, Kurdistan, Rwanda, Ukraine, Cambodia 3. Harold Stassen, San Francisco Conference, Security Council, General Assembly, UNESCO, FAO, WHO, UNICEF
	I. The Post-War Period, 1945 AD - Present	The student will demonstrate knowledge of major events and outcomes of the Cold War.	<ol style="list-style-type: none"> 1. Students will explain how Western Europe and Japan recovered after World War II. 2. Students will explain key events and revolutionary movements of the Cold War period and analyze their significance, including the Berlin 	<ol style="list-style-type: none"> 1. Allied Occupation; Marshall Plan, the European Economic Community, government planning, and the growth of welfare states 2. Chinese Civil War, People's Republic of China, Iron Curtain, Hungarian Revolution, Afghanistan, Solidarity Movement

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			<p>Wall, the Berlin airlift, Korean War, Cuban Missile Crisis, Sputnik, the Vietnam War, and the roles of the U.S. and Soviet Union in ending the Cold War.</p> <p>3. Students will assess the impact of nuclear weapons on world politics.</p> <p>4. Students will identify contributions of world leaders of this time period.</p>	<p>3. Mutual Assured Destruction doctrine, SALT treaties</p> <p>4. Nikita Khrushchev, Lech Walesca, DeGaulle, Mao Zedong, Chaing Kai-shek; Harry Truman; John F. Kennedy; Ronald Reagan; Margaret Thatcher</p>
World History	I. The Post-War Period, 1945 AD - Present	<p>The student will demonstrate knowledge of political, economic, social and cultural aspects of independence movements and development efforts.</p>	<p>1. Students will analyze the independence movement in India, the role of Gandhi, and the effectiveness of civil disobedience in this revolution.</p> <p>2. Students will analyze the struggle for independence in African nations.</p> <p>3. Students will explain how international conditions contributed to the creation of Israel and analyze why persistent conflict exists in the region.</p> <p>4. Students will analyze how Middle Eastern protectorate states achieved independence from England and France in the 20th Century, and the current day significance of the oil reserves in this region.</p> <p>5. Students will understand the reasons for the rise of military dictatorships and revolutionary movements in Latin America.</p>	<p>1. Gandhi's leadership in India</p> <p>2. Kenyatta's leadership of Kenya</p> <p>3. The Zionist movement, Ben Gurion, Palestine</p> <p>4. Iran, Iraq, Syria, Egypt</p> <p>5. Cuba, Nicaragua, Peru, Guatemala</p>
		<p>The student will demonstrate knowledge of significant political and cultural developments of the late 20th century that affect global relations.</p>	<p>1. Students will examine human rights principles and how they have been supported and violated in the late 20th Century.</p> <p>2. Students will describe and analyze processes of "globalization" as well as persistent rivalries and inequalities among the world's regions, and assess the successes</p>	<p>1. Democracy movements, women's movements, migrants' rights, reparations; genocides such as Cambodia, Serbia and Rwanda, terrorism</p> <p>2. IMF, World Bank, Fair Trade movement, UNESCO and other UN agencies, OPEC, NAFTA</p>

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			and failures of various approaches to address these.	
World History	I. The Post-war Period, 1945 AD -present	The student will identify challenges and opportunities as we enter the 21 st century.	1. Students will demonstrate knowledge of the continuing impact of September 11, 2001.	New clashes of economic, political, and religious world views
Historical Skills	A. Historical Inquiry	The student will apply research skills through an in-depth investigation of a historical topic.	<ol style="list-style-type: none"> 1. Students will define a research topic that can be studied using a variety of historical sources with an emphasis on the use of primary sources. 2. Students will identify and use repositories of research materials including libraries, the Internet, historical societies, historic sites, and archives, as appropriate for their project. 3. Students will evaluate web sites for authenticity, reliability, and bias. 4. Students will learn how to prepare for, conduct, and document an oral history. 5. Students will apply strategies to find, collect and organize historical research. 	
		The student will analyze historical evidence and draw conclusions.	<ol style="list-style-type: none"> 1. Students will understand the use of secondary sources to provide background and insights on historical events, and that secondary sources might reflect an author's bias. 2. Students will identify the principal formats of published secondary source material and evaluate such sources for both credibility and bias. 3. Students will compare and contrast primary sources to analyze first-hand accounts of historical events and evaluate such sources for both credibility and bias. 4. Students will review primary and 	2. Monographs, scholarly journals, periodical literature, newspapers, web sites, films, other electronic media

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			<p>secondary sources and compare and contrast their perspectives to shape their presentation of information relevant to their research topic.</p> <p>5. Students will understand the historical context of their research topic and how it was influenced by, or influenced, other historical events.</p> <p>6. Students will evaluate alternative interpretations of their research topic and defend or change their analysis by citing evidence from primary and secondary sources.</p>	
<p>Geography</p>	<p>B. Essential Skills</p>	<p>The student will use maps, globes, geographic information systems, and other databases to answer geographic questions at a variety of scales from local to global.</p>	<p>1. Students will demonstrate the ability to obtain geographic information from a variety of print and electronic sources.</p> <p>2. Students will make inferences and draw conclusions about the character of places based on a comparison of maps, aerial photos, and other images.</p> <p>3. Students will demonstrate the ability to use geographic information from a variety of sources to determine feasible locations for economic activities and examine voting behavior.</p>	<p>1. Atlas, World Wide Web, topographic maps, Geographic Information Systems, databases, aerial photos</p> <p>2. Make a land use map of a local area</p> <p>3. Fast food restaurant in local community, a good place to found a city, put a church or military installation, locate a solid waste disposal site, locate a feedlot, voting in presidential elections</p>

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Geography	C. Spatial Organization	The student will understand the regional distribution of the human population at local to global scales and its patterns of change.	<ol style="list-style-type: none"> 1. Students will describe the pattern of human population density in the United States and major regions of the world. 2. Students will provide examples that illustrate the impact changing birth and death rates have on the growth of the human population in the major regions of the world. 3. Students will use population pyramids and birth and death rates to compare and contrast the characteristics of regional populations at various scales. 4. Students will use the concepts of push and pull factors to explain the general patterns of human movement in the modern era, including international migration, migration within the United States and major migrations in other parts of the world. 	<ol style="list-style-type: none"> 1. Concentrations in East Asia, South Asia and Europe; in United States, Northeast, Southwest 2. Slowing growth rate in Europe, rapid growth rate in Kenya, negative rates Eastern Europe 3. Compare Sweden with Kenya, suburban and inner city census tracts 4. Migration to the United States from Europe, Africa and Asia; migration within the United States; refugee movements, and labor migrations to North America, Northern Europe, and the Middle East, with special focus on current migration from Mexico

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		The student will describe and provide examples of the primary factors behind the regional pattern of culture groups in the United States and the world.	<ol style="list-style-type: none"> 1. Students will use regions to analyze the locational patterns of culture groups at various scales. 2. Students will use concepts and models of the process of diffusion to interpret the spread of culture traits. 3. Students will describe the regional distribution of the major culture groups of the United States (as defined by the U.S. census) and recent patterns of change. 4. Students will cite a variety of examples that illustrate how landscapes reflect the cultural characteristics of their inhabitants. 	<ol style="list-style-type: none"> 1. Patterns of language and religion, subsistence agriculturists 2. Spread of English language, fashions, technology 3. Native Americans, African Americans, Hispanics, Asian Americans 4. Suburban developments, urban developments, agricultural communities, retirement communities, New England, California
Strand	Sub-Strand	Standard	No.	Benchmarks
Geography	C. Spatial Organization	The student will explain how the regionalization of space into political units affects human behavior.	<ol style="list-style-type: none"> 1. Students will understand the concept of nationalism and of sovereign political states and how sovereignty is impacted by international agreements. 2. Students will provide examples of the impact of political boundaries on human behavior and economic activities. 3. Students will understand the patterns of colonialism and how its legacy affects emergence of independent states in Africa, Asia, and Latin America as well as the tensions that arise when boundaries of political units do not correspond to nationalities of people living within them. 4. Students will evaluate a map of proposed voting districts according to the criteria of clarity, size, and compactness that districts are 	<ol style="list-style-type: none"> 1. Restrictions on migration, free trade zones, Law of the Sea, WWII, Peloponnesian War 2. NATO, the European Union and the North American Free Trade Agreement, school districts, city boundaries, Mexican border with California and Arizona, Cuban border and proximity to Florida 3. Division of Africa and Asia into colonies, Development of Malaysia, South Africa, Somalia 4. Minnesota, North Carolina, California, Texas, Congressional Districts, State Legislative Districts, City Council Districts

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			<p>supposed to meet.</p>	
		<p>The student will analyze the patterns of location, functions, structure, and characteristics of local to global settlement patterns and the processes that affect the location of cities.</p>	<ol style="list-style-type: none"> 1. Students will describe the contemporary patterns of large cities. 2. Students will describe the processes that have produced this pattern of cities. 3. Students will describe how changes in transportation and communication technologies affected the urbanization of the United States. 4. Students will describe how changes in transportation technology, government policies, lifestyles, and cycles in economic activity impact the suburbanization of the United States. 5. Students will explain the internal spatial structure of cities in the United States. 6. Students will provide examples of how the internal structure of cities varies around the world. 	<ol style="list-style-type: none"> 1. Cities of more than 5 million around the world, metro areas of more than 1 million in the United States 2. Industrialization and colonization, globalization 3. Steamboats, railroad development, highway building, construction of airports 4. Freeway, federal mortgage insurance, importance of family 5. Central business and service district, industrial zones, residential districts 6. Latin American, Southeast Asian, North American, South Asian cities

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<p>Geography</p>	<p>C. Spatial Organization</p>	<p>The student will use regions and the interaction among them to analyze the present patterns of economic activity in the United States and around the world at various scales.</p>	<ol style="list-style-type: none"> 1. Students will describe and provide examples of the primary factors behind the regional pattern of economic activity in the United States. 2. Students will describe and provide examples of the primary factors behind the regional pattern of economic activity in the primary industrial regions of the world. 3. Students will describe how the technological and managerial changes associated with the third agricultural revolution have impacted the regional patterns of crop and livestock production. 4. Students will understand how the transportation and communication systems have impacted the development of regions. 5. Students will describe patterns of consumption and production of the agricultural commodities that are traded among nations. 6. Students will describe patterns of consumption and production of fossil fuels that are traded among nations. 7. Students will describe how geographic models can help to explain the location of commercial activities and land use patterns in the United States and the world. 8. Students will explain the variations in economic activity and land use within the state of Minnesota analyze issues related to land use and reach conclusions about the potential for change in various regions. 9. Students will describe changes in 	<ol style="list-style-type: none"> 1. Patterns of agriculture, industrialization, de-industrialization 2. Global division of labor, rise of newly industrial countries 3. Poultry production, genetically modified crops, the role of Norman Borlaug in the Green Revolution 4. Railroads in Africa, fiber optic networks in California 5. Coffee trade between South America and the United States, grain trade between the United States and the People's Republic of China 6. Oil trade between the Middle East and Europe, aluminum manufacturing in United States, clothing manufacturing in China 7. Soft drink bottling plants in large American cities, auto assembly plants, clothing manufacturing plants, store locations 8. Dairy farming in central Minnesota, Iron Range, sugar beets 9. Life expectancy, fertility, average income, rates of women's participation in labor force 10. The industrialization of China, or the establishment of international call centers in India
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Strand	Sub-Strand	Standard	No.	Benchmarks
			<p>common statistical measures of population or economy that occur as countries develop economically.</p> <p>10. Students will cite a variety of examples of how economic or political changes in other parts of the world can affect their lifestyle.</p>	
Geography	D. Inter-connections	The student will describe how humans influence the environment and in turn are influenced by it.	<ol style="list-style-type: none"> 1. Students will provide a range of examples illustrating how types of government systems and technology impact the ability to change the environment or adapt to it. 2. Students will analyze the advantages and drawbacks of several common proposals to change the human use of environmental resources. 3. Students will understand and analyze examples of the impacts of natural hazards on human activities and land use. 	<ol style="list-style-type: none"> 1. Construction of dams, Soviet Union vs. United States, industrial North vs. agricultural South 2. Recycling, limiting energy consumption, new fuels 3. Wildfires in southern California, tornados, hurricanes
Economics	A. The Market Economy (Micro Economics)	The student will understand that in a market economy income is earned in different ways.	<ol style="list-style-type: none"> 1. Students will identify multiple forms of income and their sources 2. Students will recognize types and roles of firms. 	<ol style="list-style-type: none"> 1. Wages and salary, rent, interest, and profit 2. Corporation (3M), partnership (a law firm), proprietorship (a barber shop)

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Economics	A. The Market Economy (Micro Economics)	The student will understand business organizations, market structures, and financial institutions that operate within our economy.	<ol style="list-style-type: none"> 1. Students will identify and compare and contrast various industries and the occupations related to them. 2. Students will compare and contrast the concepts of competition and monopoly, and predict consequences of each. 3. Students will describe various financial institutions, compare and contrast their roles, and explain how those institutions relate to their lives. 	<ol style="list-style-type: none"> 1. Tourist, agricultural, health services, oil 2. Farmers' market (competition), electric distribution (monopoly) 3. Banks, credit unions, stock market, the Federal Reserve
		The student will understand the basic characteristics of markets and the role of prices in modern market economies.	<ol style="list-style-type: none"> 1. Students will describe the determination of equilibrium market prices by applying principles of supply and demand to markets for goods and services. 2. Students will identify the direct and indirect effects of price floors and price ceilings. 3. Students will identify several factors that lead to variation in market prices and quantities exchanged by changes in supply and/or demand. 4. Students will explain how interest rates and exchange rates are influenced by market conditions and how changes in interest rates affect individual and business decision making. 	<ol style="list-style-type: none"> 1. Market for wheat 2. Minimum wage, rent control 3. Change in income, population, number of sellers, technology 4. Canadian vs. United States' dollar exchange rate, car loan interest rates
		The student will understand that firms in a market economy experience varying degrees of competition for the good or service that they sell.	<ol style="list-style-type: none"> 1. Students will explain how competition among sellers often results in lower prices, higher product quality, better customer service and a more efficient allocation of scarce resources. 	<ol style="list-style-type: none"> 1. Evolution of telecommunications

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Strand	Sub-Strand	Standard	No.	Benchmarks
Economics	A. The Market Economy (Micro Economics)	The student will understand the risks and opportunities associated with entrepreneurship.	<ol style="list-style-type: none"> 1. Students will explain that entrepreneurs accept the risks associated with organizing productive resources to produce goods and services, with the hope to earn profits. 2. Students will describe the role of innovation and profit motive in helping to reduce problems associated with scarcity. 	<ol style="list-style-type: none"> 1. "Famous Dave" Anderson, Bill Gates, local business person 2. Plastics replacing steel, petroleum developed to replace whale oil
		The student will understand the role of labor in the economy.	<ol style="list-style-type: none"> 1. Students will describe the role and characteristics of collective bargaining, as well as the key components of a typical negotiated labor management contract. 2. Students will describe and analyze the role of unions in the United States economy in the past and present. 	<ol style="list-style-type: none"> 1. Mediation, arbitration, strike 2. AFL-CIO
		The student will understand the economic role of government in a free market economy.	<ol style="list-style-type: none"> 1. Students will identify that one important role for government in the economy is to secure and enforce property rights. 2. Students will identify and explain public goods. 3. Students will recognize that, in the United States, the federal government enforces antitrust laws and regulations to try to maintain effective levels of competition in as many markets as possible. 4. Students will recognize that some government policies attempt to redistribute income. 	<ol style="list-style-type: none"> 1. Protection from trespassers and thieves, protection from foreign invaders, enforcement of legal contracts 2. Highways, public schools, public libraries, national defense, fireworks displays, lighthouses 3. Sherman Antitrust Act, break up of AT&T 4. Progressive income taxes, exemption of food and clothing in sales taxes, Medicaid

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Strand	Sub-Strand	Standard	No.	Benchmarks
Economics	B. The National Economy (Macro Economics)	The student will understand the economic activities of government.	<ol style="list-style-type: none"> 1. Students will explain that the government pays for the goods and services it provides through taxing and borrowing. 2. Students will explain how the government regulates economic activity to promote the public welfare, encourage competition, and protect against monopolistic abuses. 	<ol style="list-style-type: none"> 1. Education, road, police, income tax (16th Amendment), payroll tax, city sales tax, property tax, war bonds 2. Pollution control, SEC, Federal Reserve, Anti-Trust, child labor laws
		The student will understand the concepts that measure the national economy.	<ol style="list-style-type: none"> 1. Students will define and give examples of basic economic terms. 2. Students will give examples of measurements that indicate the economic conditions of depression, recession, and expansion. 	<ol style="list-style-type: none"> 1. Unemployment, inflation, interest rates, Gross Domestic Product (GDP) 2. Unemployment and reduction in output during Great Depression, stagflation of 1970s
		The student will understand and explain that the United States' economy is primarily a free market system.	<ol style="list-style-type: none"> 1. Students will understand and explain that free market economies are regulated primarily by supply and demand, and that competition is essential to a free market economy. 	
		The student will understand basic measures of overall economic performance.	<ol style="list-style-type: none"> 1. Students will analyze the interrelationships among the unemployment rate, the inflation rate, and the rate of economic growth. 2. Students will describe how the concept of the balance of trade is used to measure the international flow of goods and services. 	<ol style="list-style-type: none"> 1. CPI, GDP 2. Imports and exports
		The student will analyze the causes and consequences of overall economic fluctuations.	<ol style="list-style-type: none"> 1. Students will describe the basic characteristics of economic recessions and economic expansions. 2. Students will understand some of the reasons for fluctuations in economic activity. 	<ol style="list-style-type: none"> 1. Changes in unemployment and/or income 2. Natural disasters, oil prices in the 1970s, changes in consumer confidence

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Strand	Sub-Strand	Standard	No.	Benchmarks
Economics	B. The National Economy (Macro Economics)	The student will understand the influence of federal government budgetary policy and the Federal Reserve System's monetary policy.	<ol style="list-style-type: none"> 1. Students will identify that fiscal policies are decisions to change spending and/or tax levels by the federal government. 2. Students will explain the direct and indirect effects of fiscal policy on employment, output, and interest rates. 3. Students will explain the relationship between federal budget deficits and the national debt. 4. Students will identify the ways in which monetary policy influences employment, output, inflation, and interest rates. 5. Students will explain how interest rates influence business investment spending and consumer spending on housing, cars, and other major purchases. 	<ol style="list-style-type: none"> 1. Tax cuts 2. Multiplier effect of government spending, crowding out 3. Debt clock, federal government budget 4. Interpretation of news item covering Federal Reserve policies 5. Refinance mortgages, interest rate incentives on new automobiles
		The student will understand that economic growth is the primary means by which a country can improve the future economic standard of living for its citizens.	<ol style="list-style-type: none"> 1. Students will explain that Gross Domestic Product (GDP) per capita is a measure that permits comparisons of material living standards over time and among people in different nations. 2. Students will identify that the productivity of workers is measured by dividing the output of goods and services by the number of hours worked. 3. Students will recognize that standards of living increase as the productivity of workers rises. 4. Students will understand that investments in physical capital (machinery, equipment, and structures), human capital (education, training, skills), and new 	<ol style="list-style-type: none"> 1. Bangladesh vs. Singapore vs. United States 2. Productivity simulation 3. Computers 4. Automation, calculators

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			technologies commonly increase productivity and contribute to an expansion of future economic prosperity.	
Economics	C. Essential Skills	The student will understand and use economic concepts, theories, principles and quantitative methods to analyze current events.	<ol style="list-style-type: none"> 1. Students will use tables, graphs, equations, diagrams, and charts to interpret economic information. 2. Students will evaluate the economic implications of current issues as found in such sources as magazine articles, radio and television reports, editorials, and Internet sites. 3. Students will distinguish among the contributions to economic thought made by leading theorists including but not limited to, Adam Smith, Thomas Malthus, Karl Marx, Milton Friedman, and John Maynard Keynes. 	<ol style="list-style-type: none"> 1. Inflation rate, unemployment rate, the level of national output, interest rates, trade deficit, budget deficit, and the rate of economic growth 2. Stadium issues, highway construction, local economic development
		The student will learn and be able to apply personal financial management and investment practices	<ol style="list-style-type: none"> 1. Students will analyze short- and long-term investment options such as stocks, bonds, real estate, and mutual funds by comparing the risk, return, and liquidity of these instruments. 2. Students will recognize a proper role for credit and how to utilize risk management strategies including the use of insurance. 3. Students will explain the concepts of compound interest and the Rule of 72, and the applicability to both investment gains and debt retirement. 	

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Strand	Sub-Strand	Standard	No.	Benchmarks
Economics	D. International Economic Relationships	The student will understand the key factors involved in the United States' economic relationships with other nations.	<ol style="list-style-type: none"> 1. Students will understand and apply the concepts of comparative and absolute advantage in international trade. 2. Students will analyze the controversy and major arguments for and against international trade agreements such as NAFTA and GATT. 3. Students will know the major characteristics of the principal types of economic systems in this world and compare and contrast them with the U.S. system. 4. Students will know and understand the significance of these concepts: trade deficits, exchange rates, trade barriers, balance of trade, foreign exchange markets, and give examples of their current application to U.S. trade relationships with other countries in the world. 5. Students will know the roles of the World Bank and IMF, analyze their effectiveness in the world community, and critique their operation in a specific country. 6. Students will examine the impact of 	

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			<p>U.S. foreign policy on the economies of developing countries.</p> <p>7. Students will know and analyze the reasons some countries are characterized as developing nations.</p> <p>8. Students will examine the purpose and evaluate the effectiveness of U.S. economic aid to developing countries.</p>	
Strand	Sub-Strand	Standard	No.	Benchmarks
Economics	E. Economics and Public Policy	The student will apply economic theories and concepts to public policy issues.	<p>1. Students will know the definitions, evaluate the purposes, and analyze the effects of the following economic activities: government subsidies, government incentives, economic externalities, profit maximization, multinational corporations, unions, right to work laws, government deregulation, entitlements, progressive taxes, government's role in providing in public goods, economic safety nets, and corporate crime.</p> <p>2. Students will use their knowledge of economic concepts and data to analyze a significant national public policy issue and recommend a</p>	

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			<p>solution.</p> <ol style="list-style-type: none"> 3. Students will know and analyze how income, and wealth are distributed among different sectors of the population. 4. Students will know how poverty is defined in the U.S., what its causes are, examine possible solutions, and analyze the impact poverty has on the short and long run health of the economy. 5. Students will use their knowledge of economics to describe and analyze significant world economic issues. 6. Students will use the analytical skills commonly used in economics to analyze public policy issues in their community, state, and nation. 7. Students will identify and analyze the conflicts that can result from differences between business interests and community interests. 8. Students will examine and analyze the economic principles practiced in this country to determine their consistency with the democratic principles upon which our country is based. 	
<p>Government and Citizenship</p>	<p>A. Civic Values, Skills, Rights and Responsibilities</p>	<p>The student will understand the scope and limits of rights, the relationship among them, and how they are secured.</p>	<ol style="list-style-type: none"> 1. Students will analyze the meaning and importance of rights in the U.S. Constitution and the Bill of Rights, and subsequent amendments, and in the Minnesota Constitution. 2. Students will describe the expansion of protection of individual rights through legislative action and court interpretation. 3. Students will understand equal protection and due process and analyze landmark Supreme Court 	<ol style="list-style-type: none"> 1. Amendments 1-10, 13-15, 19, 26 2. Civil Rights Act, Individuals with Disabilities Act; In Re Gault, <i>Tinker v. Des Moines</i>, <i>Brown v. Board of Education</i> 3. Due Process and Equal Protection clauses of the 14th Amendment, due process clause of 5th Amendment, <i>Gideon v. Wainwright</i>, <i>Mapp v. Ohio</i>, <i>Gitlow v. New York</i>

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			Cases' use of the 14 th Amendment to apply the Bill of Rights to the states.	
		The student will know how citizenship is defined, established, and exercised and how it has changed over time.	<ol style="list-style-type: none"> 1. Students will define citizenship and describe the processes by which individuals become United States citizens. 2. Students will compare the rights and responsibilities of U.S. citizens with the rights and responsibilities of non-citizens in the United States and describe changes in citizenship since 1870. 	<ol style="list-style-type: none"> 1. Birth in the United States, birth to at least one parent who is a U.S. citizen, adoption, marriage, immigration and naturalization, parental naturalization (for children under 18) 2. Rights of legal citizens: vote, run for public office, serve on a jury, hold certain government jobs, use a U.S. passport, receive social security benefits; Responsibilities: both citizens and non-citizens must obey the law, pay taxes, register for selective service (if permanent residents); Chinese Exclusion Act of 1882-1943, American Indian Citizenship Act of 1919, <i>U.S v. Thind</i> (1923), Indian Citizenship Act (Snyder Act) of 1924, Nationality Act of 1940, Executive Order 9066 (Japanese Internment), Immigration and Nationality Act of 1952, Voting Rights Act of 1965
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Government and Citizenship	A. Civic Values, Skills, Rights and Responsibilities	The student will analyze various methods of civic engagement needed to fulfill responsibilities of a citizen of a republic.	<ol style="list-style-type: none"> 1. Students will demonstrate the ability to use the print and electronic media to do research and analyze data. 2. Students will compare, contrast, and evaluate various forms of political persuasion for validity, accuracy, ideology, emotional appeals, bias and prejudice. 3. Students will know and analyze the points of access and influence people can use to affect elections and public policy decisions. 4. Students will understand the importance of informed decision making and the roles of public speaking, conducting a public meeting, letter writing, petition signing, negotiation, active listening, conflict resolution, and mediation, defending a public policy position in a civil conversation. 	<ol style="list-style-type: none"> 2. Web pages, editorials, letters to the editor, political cartoons, news and entertainment, political oratory such as: President Lincoln's Gettysburg address, Martin Luther King Jr.'s I Have a Dream speech, Patrick Henry's speech to the Virginia House of Burgesses, FDR's Pearl Harbor speech, President Kennedy's inaugural address "ask not what...", President Reagan's Tear Down this Wall, President Washington's Farewell address, President Bush's speech about the 9/11 attacks on the United States 3. Voting, caucusing, contacting legislators, organizing interest groups, and media, running for elective office letter writing Email, phone call, lobbying, political action committees, campaign contributions, letters to editor/op ed pieces, civil disobedience, volunteering for a campaign, voter registration and get out the vote efforts, attending council and board meetings 4. Structured dialogues, mock trials, political labels and terms commonly used in public discourse. congressional simulations, student government, peer mediation programs, parliamentary procedure
	B. Beliefs and Principles of United States Democracy	The student will demonstrate knowledge and understanding of the principles upon which the U.S. government is based.	<ol style="list-style-type: none"> 1. Students will define and provide examples of fundamental principles and core values of American political and civic life. 2. Students will evaluate how the Constitution both preserves fundamental societal values and responds to changing circumstances and beliefs. 3. Students will evaluate how well the federal and state governments protect individual rights and promote the general welfare. 4. Students will compare the 	<ol style="list-style-type: none"> 1. Liberty, natural law, the common good, general welfare, justice, equality, tolerance, respect for law, rights, responsibilities, social diversity, civic unity, constitutionalism, popular sovereignty, representative democracy, social contract

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			<p>philosophy, structure, and operations of governments of other countries with the U.S. government.</p>	
<p>Government and Citizenship</p>	<p>B. Beliefs and Principles of United States Democracy</p>	<p>The student will know sources of power and authority of the United States government.</p>	<ol style="list-style-type: none"> 1. Students will analyze the sources of authority and explain popular sovereignty, or consent of the governed, as the source of legitimate authority of government in a representative democracy or republic. 2. Students will describe the provisions of the U.S. Constitution, which delegate to the federal government the powers necessary to fulfill the purposes for which it was established. 3. Students will distinguish between the powers granted to the government and those retained by the people. 4. Students will explain how a constitutional democracy provides majority rule with equal protection for the rights of the minority through limited government and the rule of law. 	<ol style="list-style-type: none"> 2. Delegated and Enumerated powers, Implied powers (Necessary and Proper Clause)

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Strand	Sub-Strand	Standard	No.	Benchmarks
Government and Citizenship	B. Beliefs and Principles of United States Democracy	The student will understand tensions that exist between key principles of government in the United States.	<ol style="list-style-type: none"> 1. Students will explain the current and historical interpretations of the principle of equal protection of the law. 2. Students will examine the tension between the government's dual role of protecting individual rights and promoting the general welfare, the tension between majority rule and minority rights, and analyze the conflict between diversity and unity which is captured in the concept "E Pluribus Unum." 3. Students will describe the principles embedded in the Preamble to the Constitution and evaluate the progress of the United States in realizing those goals. 4. Students will analyze the role of civil disobedience in the United States. 	<ol style="list-style-type: none"> 1. <i>Plessy v. Ferguson, Brown v. Board of Education</i>, strict scrutiny 2. National security and liberty, and the rule of law, freedom of the press and the right to a fair trial

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Strand	Sub-Strand	Standard	No.	Benchmarks
Government and Citizenship	C. Roots of the Republic	The student will understand the forces that impacted the founding of the United States	<ol style="list-style-type: none"> 1. Students will describe the transplanting of English political and legal institutions to the colonies; explain how political and legal rights were defined and practiced; and analyze the development of representative government. 2. Students will recognize and analyze the impact of early documents on the development of the government of the United States. 3. Students will explain how key principles of the United States government were modeled after other political philosophies. 4. Students will describe revolutionary government structure and operations at national and state levels, and evaluate the major achievements and problems of the Confederation period. 	<ol style="list-style-type: none"> 1. Charters and governing structures of early colonies, English Common Law, political rights defined by gender and property ownership, religion, legal status, influence of Puritanism, the rise of individualism, and participatory government, conflicts between legislative and executive branches, influence of chattel slavery on concept of rights and freedoms; impact of English Civil War and "Glorious Revolution" 2. The Magna Carta, Mayflower Compact, Constitution of the Iroquois Confederation, English Bill of Rights, Blackstone's Commentaries on the Laws of England, Articles of Confederation, Federalist Papers 3. Greek democracy, Roman republic Thomas Hobbes, John Locke, Jean Jacques Rousseau, Charles-Louis de Montesquieu 4. Development of state constitutions, work of Continental Congress, Northwest Ordinance; the problems of war debt, disposal of western lands, foreign relations,

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				foreign and internal trade, banking, taxation, Shay's Rebellion
		The student will demonstrate knowledge of the continuing impact of the Declaration of Independence in the U.S. and worldwide.	<ol style="list-style-type: none"> 1. Students will analyze principles in the Declaration of Independence, including self-evident truths and inalienable rights, and its impact on the development of the United States government. 2. Students will make comparisons of the Declaration of Independence to other documents that used it as a source of reference and inspiration. 	<ol style="list-style-type: none"> 1. Laws of nature, rights, popular sovereignty, right of revolution, injuries and usurpations of the king 2. Working Men's Declaration of Independence 1829, Declaration of Sentiments 1848 (Seneca Falls) Gettysburg Address, Martin Luther King Jr.'s "I have a dream..." Later Critiques by John Stuart Mill and Henry David Thoreau
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Government and Citizenship	C. Roots of the Republic	The student will understand the process of creating the U.S. Constitution.	<ol style="list-style-type: none"> 1. Students will describe and analyze the debates over the Articles of Confederation and the process and content of the Constitutional Convention, which led to the creation of the U.S. Constitution. 2. Students will analyze the debate over ratification of the Constitution. 	<ol style="list-style-type: none"> 1. Constitutional Convention; alternative plans and compromises in drafting and approving Constitution 2. Federalist and Anti-Federalist arguments in the ratification debates, including the theories and principles discussed in the Federalist Papers and anti-Federalist tracts such as Dickinson's <i>Letters from a Pennsylvania Farmer</i>; arguments about the necessity of a Bill of Rights and James Madison's role in its adoption
		The student will know how constitutional amendments and Supreme Court interpretations of the Constitution have increased the impact of the Constitution on people's lives.	<ol style="list-style-type: none"> 1. Students will describe the development and ratification of the Bill of Rights. 2. Students will describe the events leading to later amendments. 3. Students will describe the development of the Supreme Court's function in interpreting the Constitution. 	<ol style="list-style-type: none"> 1. 1st - 10th Amendments 2. 13th, 14th, 15th, 17th, 19th, 24th, 26th Amendments 3. John Marshall's role in defining the function and power of the Supreme Court, pivotal cases such as <i>Marbury v. Madison</i>, <i>McCulloch v. Maryland</i>
	D. Governmental Processes and Institutions	The student will know how the U.S. Constitution seeks to prevent the abuse of power.	<ol style="list-style-type: none"> 1. Students will describe the concepts of separation of powers and checks and balances and analyze how they limit the powers of state and federal governments. 2. Students will define federalism and describe how power is distributed between the federal government and state governments, or retained by the people of the United States. 3. Students will explain the process of amending the U.S. Constitution. 	<ol style="list-style-type: none"> 2. 9th and 10th Amendments
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Government and Citizenship	D. Governmental Processes and Institutions	The student will understand how public policy is made, enforced, and interpreted by the legislative, executive, and judicial branches.	<ol style="list-style-type: none"> 1. Students will explain the powers and operations of the legislative branch as defined in Article I of the Constitution and describe and evaluate the procedures involved in passing laws. 2. Students will explain the powers and operations of the executive branch as defined in Article II of the Constitution and describe the roles and responsibilities of the president. 3. Students will explain the powers and operations of the judicial branch as defined in Article III of the Constitution and describe and evaluate the process used by the Supreme Court in choosing to hear, analyze, and decide a case. 4. Students will apply knowledge of the roles and responsibilities of the branches of the federal government to analyze historic and current public policy issues. 	<ol style="list-style-type: none"> 1. Article I; Structure of Congress (elections, leadership, committee system) 2. Article II; Powers and Roles of President; Structure of Executive Branch - Cabinet, Executive Office of the President, Federal Agencies; Process of policy making 3. Article III; Powers and Role of Judiciary; Federal and Supreme Court Structure; Judicial review, Judicial restraint and judicial activism, use of precedents 4. International-foreign policy, War on Terrorism, Privacy rights, Affirmative Action
		The student will understand the sovereign status of American Indian nations.	<ol style="list-style-type: none"> 1. Students will explain and analyze the unique relationship between American Indian Nations and the United States Government. 	
		The student will understand the role and influence of political processes and organizations.	<ol style="list-style-type: none"> 1. Students will describe the procedures involved in the Minnesota and national voting, and election process, including the Minnesota caucus system. 2. Students will examine the impact of American political parties and on elections and public policy. 3. Students will examine the role of interest groups, think tanks, the media, and public opinion on the political process and public policy 	<ol style="list-style-type: none"> 1. Initiative, referendum, recall

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Government and Citizenship	D. Governmental Processes and Institutions	The student will analyze the relationships and interactions between the United States and other nations and evaluate the role of the U.S. in world affairs.	<p>formation.</p> <ol style="list-style-type: none"> 1. Students will describe how the world is aligned politically and give examples of the ways nation states interact. 2. Students will compare and contrast the structure and organization of various forms of political systems, including the U.S. government. 3. Students will describe how governments interact in world affairs and explain reasons for conflict among nation states. 4. Students will describe the ways the U.S. government develops and carries out U.S. foreign policy and analyze how individuals, businesses, labor, and other groups influence U.S. foreign policy. 5. Students will explain and evaluate international organizations and international law and how participation in these organizations and international law is voluntary. 6. Students will explain the effects of developments in other nations on state and community life in Minnesota, and explain the role of individuals in world affairs. 	<ol style="list-style-type: none"> 1. Trade, diplomacy, treaties and agreements, military actions 3. Competition for resources and territory, differences in system of government, human rights issues, religious or ethnic conflict 4. Diplomacy, foreign aid, military aid, humanitarian aid, treaties, sanctions and military intervention 5. United Nations, non-governmental organizations, treaties, national sovereignty
		The student will understand Minnesota state and local government structure and political processes.	<ol style="list-style-type: none"> 1. Students will examine the structure and process of Minnesota Government as created by the Minnesota Constitution. 2. Students will compare the Minnesota Constitution with the U.S. Constitution. 3. Students will describe powers, features, and procedures of local government in Minnesota. 	

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