

# Consolidated Standards (Grades 9-12)

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# Common Core Standards Alignment (Grades 9-10)

English Language Arts

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## Legend

<input checked="" type="radio"/>	Standard addressed in
<input type="radio"/>	Standard could be addressed by <b>additional activities</b>

## Literacy in History/Social Studies, Science, and Technical Subjects (Grades 9-10)

Indicator	Indicator Statement	Addressed
RST.9-10.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.5	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.6	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.7	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.8	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.9	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	<input checked="" type="radio"/> <input type="radio"/>
RST.9-10.10	By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.	

# Common Core Standards Alignment (Grades 11-12)

English Language Arts

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## Legend

<input checked="" type="radio"/>	Standard addressed in
<input type="radio"/>	Standard could be addressed by <b>additional activities</b>

## Literacy in History/Social Studies, Science, and Technical Subjects (Grades 11-12)

Indicator	Indicator Statement	Addressed
RST.11-12.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.2	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.5	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.6	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.8	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.	<input checked="" type="radio"/> <input type="radio"/>
RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	<input checked="" type="radio"/> <input type="radio"/>

Indicator	Indicator Statement	Addressed
RST.11-12.10	By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.	

# Common Core Standards Alignment (High School)

Math

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## Legend

<input checked="" type="radio"/>	Standard addressed in
<input type="radio"/>	Standard could be addressed by <b>additional activities</b>

## Number & Quantity

Indicator	Indicator Statement	Addressed
HSN.RN.A.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation in radicals in terms of rational exponents	<input type="radio"/>
HSN.RN.A.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents	<input type="radio"/>
HSN.RN.A.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational	
HSN.Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas, choose and interpret the scale and the origin in graphs and data display	<input checked="" type="radio"/> <input type="radio"/>
HSN.Q.A.2	Define the appropriate quantities for the purpose of descriptive modeling	<input checked="" type="radio"/> <input type="radio"/>
HSN.Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities	<input checked="" type="radio"/> <input type="radio"/>

## Algebra

Indicator	Indicator Statement	Addressed
HSA.SSE.A.1	Interpret expressions that represent a quantity in terms of its context.	<input checked="" type="radio"/> <input type="radio"/>
HSA.SSE.A.1.A	Interpret parts of an expression, such as terms, factors, and coefficients.	<input checked="" type="radio"/> <input type="radio"/>
HSA.SSE.A.1.B	Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as the product of $P$ and a factor not depending on $P$ .	

Indicator	Indicator Statement	Addressed
HSA.SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$ .	
HSA.SSE.B.3.A	Factor a quadratic expression to reveal the zeros of the function it defines.	<input type="radio"/>
HSA.SSE.B.3.B	Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.	<input type="radio"/>
HSA.SSE.B.3.C	Use the properties of exponents to transform expressions for exponential functions. For example the expression $1.15t$ can be rewritten as $(1.151/12)^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.	
HSA.SSE.B.4	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.*	
HSA.APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	<input type="radio"/>
HSA.APR.B.2	Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number $a$ , the remainder on division by $x - a$ is $p(a)$ , so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$ .	
HSA.APR.B.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	
HSA.APR.C.4	Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.	
HSA.APR.C.5	Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of $x$ and $y$ for a positive integer $n$ , where $x$ and $y$ are any numbers, with coefficients determined for example by Pascal's Triangle	
HSA.APR.D.6	Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$ , where $a(x)$ , $b(x)$ , $q(x)$ , and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$ , using inspection, long division, or, for the more complicated examples, a computer algebra system.	<input type="radio"/>
HSA.APR.D.7	Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.	
HSA.CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	<input checked="" type="radio"/> <input type="radio"/>

Indicator	Indicator Statement	Addressed
HSA.CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	<input checked="" type="radio"/> <input type="radio"/>
HSA.CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.	<input checked="" type="radio"/> <input type="radio"/>
HSA.CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance $R$ .	<input checked="" type="radio"/> <input type="radio"/>
HSA.REI.A.1	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	<input checked="" type="radio"/> <input type="radio"/>
HSA.REI.A.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	<input checked="" type="radio"/> <input type="radio"/>
HSA.REI.B.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	<input checked="" type="radio"/> <input type="radio"/>
HSA.REI.B.4	Solve quadratic equations in one variable.	<input type="radio"/>
HSA.REI.B.4.A	Use the method of completing the square to transform any quadratic equation in $x$ into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.	<input type="radio"/>
HSA.REI.B.4.B	Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers $a$ and $b$ .	
HSA.REI.C.5	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	
HSA.REI.C.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	<input type="radio"/>
HSA.REI.C.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$ .	
HSA.REI.C.8	Represent a system of linear equations as a single matrix equation in a vector variable.	<input type="radio"/>

Indicator	Indicator Statement	Addressed
HSA.REI.C.9	Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension $3 \times 3$ or greater).	
HSA.REI.D.10	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	
HSA.REI.D.11	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*	
HSA.REI.D.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	

## Functions

Indicator	Indicator Statement	Addressed
HSF.BF.A.1	Write a function that describes a relationship between two quantities.	<input checked="" type="radio"/> <input type="radio"/>
HSF.BF.A.1.A	Determine an explicit expression, a recursive process, or steps for calculation from a context.	<input checked="" type="radio"/> <input type="radio"/>
HSF.BF.A.1.B	Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.	<input checked="" type="radio"/> <input type="radio"/>
HSF.BF.A.1.C	Compose functions. For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.	<input checked="" type="radio"/> <input type="radio"/>
HSF.BF.A.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms	
HSF.BF.B.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.	



Indicator	Indicator Statement	Addressed
HSF.BF.B.4	Find inverse functions.	
HSF.BF.B.4.B	Verify by composition that one function is the inverse of another.	
HSF.BF.B.4.C	Read values of an inverse function from a graph or a table, given that the function has an inverse.	
HSF.BF.B.4.D	Produce an invertible function from a non-invertible function by restricting the domain.	
HSF.LE.A.1	Distinguish between situations that can be modeled with linear functions and with exponential functions.	<input checked="" type="radio"/> <input type="radio"/>
HSF.LE.A.1.B	Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.	
HSF.LE.A.1.C	Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.	
HSF.LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	<input checked="" type="radio"/> <input type="radio"/>
HSF.LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	<input checked="" type="radio"/> <input type="radio"/>
HSF.LE.A.4	For exponential models, express as a logarithm the solution to $ab^ct = d$ where $a$ , $c$ , and $d$ are numbers and the base $b$ is 2, 10, or $e$ ; evaluate the logarithm using technology.	<input checked="" type="radio"/> <input type="radio"/>
HSF.LE.B.5	Interpret the parameters in a linear or exponential function in terms of a context.	<input checked="" type="radio"/> <input type="radio"/>

# Next Generation Science Standards (Grades 9-12)

Performance Expectations

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## Legend

	Standard addressed in
	Standard could be addressed by <b>additional activities</b>

## Matter & Its Interactions

Indicator	Indicator Statement	Addressed
HS - PS1-1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost level of atoms	
HS - PS1-2	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the period table, and knowledge of patterns of chemical properties	
HS - PS1-3	Plan and construct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles	
HS - PS1-4	Develop a model to illustrate the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	
HS - PS1-5	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on rate at which a reaction occurs	
HS - PS1-6	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	
HS - PS1-7	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction	
HS - PS1-8	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the process of fission, fusion, and radioactive decay.	

## Motion & Stability: Forces & Interactions

Indicator	Indicator Statement	Addressed
HS- PS2-1	Analyze the data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force of a macroscopic object, its mass, and its acceleration	
HS- PS2-2	Use mathematical representations to support the claim that the total momentum of a system of objects is observed when there is no net force on the system.	<input checked="" type="radio"/> <input type="radio"/>
HS- PS2-3	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	
HS- PS2-4	Use mathematical representations of Newton's Law of Gravitation and Coulombs Law to describe and predict the gravitational and electrostatic forces between objects	<input checked="" type="radio"/> <input type="radio"/>
HS- PS2-5	Plan and conduct in investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current	<input checked="" type="radio"/> <input type="radio"/>
HS- PS2-6	Communicate scientific and technical information about why the molecular level structure is important in the functioning of designed materials.	<input checked="" type="radio"/> <input type="radio"/>

## Waves

Indicator	Indicator Statement	Addressed
HS - PS4-1	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	<input checked="" type="radio"/> <input type="radio"/>
HS - PS4-2	Evaluate questions about the advantages of using digital transmission and storage of information	<input checked="" type="radio"/> <input type="radio"/>
HS - PS4-3	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations on model is more useful than the other	<input checked="" type="radio"/> <input type="radio"/>
HS - PS4-4	Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	<input checked="" type="radio"/> <input type="radio"/>
HS - PS4-5	Communicate technical information about how some technological devices use the principle of wave behavior and wave interactions with matter to transmit and capture information and energy.	<input checked="" type="radio"/> <input type="radio"/>

## Earth & Human Activity

Indicator	Indicator Statement	Addressed
HS- ESS3-1	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity	<input checked="" type="radio"/> <input type="radio"/>
HS- ESS3-2	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios	<input checked="" type="radio"/> <input type="radio"/>
HS- ESS3-3	Create a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity.	<input checked="" type="radio"/> <input type="radio"/>
HS- ESS3-4	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems	<input checked="" type="radio"/> <input type="radio"/>
HS- ESS3-5	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems	<input checked="" type="radio"/> <input type="radio"/>
HS- ESS3-6	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	<input checked="" type="radio"/> <input type="radio"/>

## Engineering Design

Indicator	Indicator Statement	Addressed
HS- ETS1-1	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.	<input checked="" type="radio"/> <input type="radio"/>
HS- ETS1-2	Design a solution to a complex real world problem by breaking it down in smaller, more manageable problems that can be solved through engineering.	<input checked="" type="radio"/> <input type="radio"/>
HS- ETS1-3	Evaluate a solution to a complex real world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural and environmental impacts	<input checked="" type="radio"/> <input type="radio"/>
HS- ETS1-4	Use a computer simulation to model the impact of proposed solutions to a complex real world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.	<input checked="" type="radio"/> <input type="radio"/>

# Partnership for 21<sup>st</sup> Century Learning Alignment

Student Outcomes – All Grades

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## Legend

<input checked="" type="radio"/>	Standard addressed in
<input type="radio"/>	Standard could be addressed by <b>additional activities during the SeaPerch build</b>

*Note: Only standards groups where at least one standard is met are included in the mapping below.*

## Core Subjects

Cluster	Indicator Statement	Addressed
<b>Global Awareness</b>	Use 21st century skills to understand and address global issues.	<input checked="" type="radio"/> <input type="radio"/>
<b>Environmental Literacy</b>	Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water and ecosystems.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.).	<input checked="" type="radio"/> <input type="radio"/>
	Investigate and analyze environmental issues and make accurate conclusions about effective solutions.	<input checked="" type="radio"/> <input type="radio"/>
	Take individual and collective action towards addressing environmental challenges (e.g., participate in global actions, designing solutions that inspire action on environmental issues).	<input checked="" type="radio"/> <input type="radio"/>

## Creativity & Innovation

Cluster	Indicator Statement	Addressed
<b>Think Creatively</b>	Use a wide range of idea creation techniques (such as brainstorming).	<input checked="" type="radio"/> <input type="radio"/>
	Create new and worthwhile ideas (both incremental and radical concepts).	<input checked="" type="radio"/> <input type="radio"/>
	Elaborate, refine, analyze, and evaluate their own ideas in order to improve and maximize creative efforts.	<input checked="" type="radio"/> <input type="radio"/>
	Develop, implement, and communicate new ideas to others effectively.	<input checked="" type="radio"/> <input type="radio"/>

<b>Work Creatively with Others</b>	Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate originality and inventiveness in work and understand the real-world limits to adopting new ideas.	<input checked="" type="radio"/> <input type="radio"/>
	View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes.	<input checked="" type="radio"/> <input type="radio"/>
<b>Implement Innovations</b>	Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur.	<input checked="" type="radio"/> <input type="radio"/>

## Critical Thinking & Problem Solving

Cluster	Indicator Statement	Addressed
<b>Reason Effectively</b>	Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation.	<input checked="" type="radio"/> <input type="radio"/>
	Use systems thinking.	<input checked="" type="radio"/> <input type="radio"/>
	Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems.	<input checked="" type="radio"/> <input type="radio"/>
	Make judgments and decisions.	<input checked="" type="radio"/> <input type="radio"/>
	Effectively analyze and evaluate evidence, arguments, claims, and beliefs.	<input checked="" type="radio"/> <input type="radio"/>
	Analyze and evaluate major alternative points of view.	<input checked="" type="radio"/> <input type="radio"/>
	Synthesize and make connections between information and arguments.	<input checked="" type="radio"/> <input type="radio"/>
	Interpret information and draw conclusions based on the best analysis.	<input checked="" type="radio"/> <input type="radio"/>
	Reflect critically on learning experiences and processes.	<input checked="" type="radio"/> <input type="radio"/>
<b>Solve Problems</b>	Solve different kinds of non-familiar problems in both conventional and innovative ways.	<input checked="" type="radio"/> <input type="radio"/>
	Identify and ask significant questions that clarify various points of view and lead to better solutions.	<input checked="" type="radio"/> <input type="radio"/>

## Communication & Collaboration

Cluster	Indicator Statement	Addressed
<b>Communicate Clearly</b>	Listen effectively to decipher meaning, including knowledge, values, attitudes, and intentions.	<input checked="" type="radio"/> <input type="radio"/>
	Use communication for a range of purposes (e.g. to inform, instruct, motivate, and persuade).	<input checked="" type="radio"/> <input type="radio"/>
	Communicate effectively in diverse environments (including multi-lingual).	<input checked="" type="radio"/> <input type="radio"/>
	Collaborate with others.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate ability to work effectively and respectfully with diverse teams.	<input checked="" type="radio"/> <input type="radio"/>
	Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal.	<input checked="" type="radio"/> <input type="radio"/>
	Assume shared responsibility for collaborative work, and value the individual contributions made by each team member.	<input checked="" type="radio"/> <input type="radio"/>

## Information Literacy

Cluster	Indicator Statement	Addressed
<b>Access &amp; Evaluate Information</b>	Access information efficiently (time) and effectively (sources).	<input checked="" type="radio"/> <input type="radio"/>
	Evaluate information critically and competently.	<input checked="" type="radio"/> <input type="radio"/>
<b>Use &amp; Manage Information</b>	Use information accurately and creatively for the issue or problem at hand.	<input checked="" type="radio"/> <input type="radio"/>
	Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information.	<input checked="" type="radio"/> <input type="radio"/>

## Flexibility & Adaptability

Cluster	Indicator Statement	Addressed
<b>Adapt to Change</b>	Adapt to varied roles, job responsibilities, schedules, and contexts.	<input checked="" type="radio"/> <input type="radio"/>
	Work effectively in a climate of ambiguity and changing priorities.	<input checked="" type="radio"/> <input type="radio"/>
<b>Be Flexible</b>	Incorporate feedback effectively.	<input checked="" type="radio"/> <input type="radio"/>
	Deal positively with praise, setbacks, and criticism.	<input checked="" type="radio"/> <input type="radio"/>

	Understand, negotiate, and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments.	<input checked="" type="radio"/> <input type="radio"/>
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### Initiative & Self-Direction

Cluster	Indicator Statement	Addressed
<b>Manage Goals &amp; Time</b>	Set goals with tangible and intangible success criteria.	<input checked="" type="radio"/> <input type="radio"/>
	Balance tactical (short-term) and strategic (long-term) goals.	<input checked="" type="radio"/> <input type="radio"/>
	Utilize time and manage workload efficiently.	<input checked="" type="radio"/> <input type="radio"/>
<b>Work Independently</b>	Monitor, define, prioritize, and complete tasks without direct oversight.	<input checked="" type="radio"/> <input type="radio"/>
	Be self-directed learners.	<input checked="" type="radio"/> <input type="radio"/>
	Go beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate initiative to advance skill levels towards a professional level.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate commitment to learning as a lifelong process.	<input checked="" type="radio"/> <input type="radio"/>
	Reflect critically on past experiences in order to inform future progress.	<input checked="" type="radio"/> <input type="radio"/>

### Social & Cross-Cultural Skills

Cluster	Indicator Statement	Addressed
<b>Interact Effectively with Others</b>	Know when it is appropriate to listen and when to speak.	<input checked="" type="radio"/> <input type="radio"/>
	Conduct themselves in a respectable, professional manner.	<input checked="" type="radio"/> <input type="radio"/>
<b>Work Effectively in Diverse Teams</b>	Respect cultural differences and work effectively with people from a range of social and cultural backgrounds.	<input checked="" type="radio"/> <input type="radio"/>
	Respond open-mindedly to different ideas and values.	<input checked="" type="radio"/> <input type="radio"/>
	Leverage social and cultural differences to create new ideas and increase both innovation and quality of work.	<input checked="" type="radio"/> <input type="radio"/>



## Productivity & Accountability

Cluster	Indicator Statement	Addressed
<b>Manage Projects</b>	Set and meet goals, even in the face of obstacles and competing pressures.	<input checked="" type="radio"/> <input type="radio"/>
	Prioritize, plan, and manage work to achieve the intended result.	<input checked="" type="radio"/> <input type="radio"/>
<b>21<sup>st</sup> Century Standards</b>	Engage students with the real-world data, tools, and experts they will encounter in college, on the job, and in life; students learn best when actively engaged in solving meaningful problems.	<input checked="" type="radio"/> <input type="radio"/>
	Allow for multiple measures of mastery.	<input checked="" type="radio"/> <input type="radio"/>
<b>Assessment of 21<sup>st</sup> Century Skills</b>	Emphasize useful feedback on student performance that is embedded into everyday learning.	<input checked="" type="radio"/> <input type="radio"/>
<b>21<sup>st</sup> Century Curriculum &amp; Instruction</b>	Teach 21st century skills discretely in the context of key subjects and 21st century interdisciplinary themes.	<input checked="" type="radio"/> <input type="radio"/>
	Focus on providing opportunities for applying 21st century skills across content areas and for a competency-based approach to learning.	<input checked="" type="radio"/> <input type="radio"/>
	Enable innovative learning methods that integrate the use of supportive technologies, inquiry- and problem-based approaches and higher order thinking skills.	<input checked="" type="radio"/> <input type="radio"/>
	Encourage the integration of community resources beyond school walls.	<input checked="" type="radio"/> <input type="radio"/>
<b>21<sup>st</sup> Century Professional Development</b>	Highlight ways teachers can seize opportunities for integrating 21st century skills, tools, and teaching strategies into their classroom practice — and help them identify what activities they can replace/de-emphasize.	<input checked="" type="radio"/> <input type="radio"/>
	Balance direct instruction with project-oriented teaching methods.	<input checked="" type="radio"/> <input type="radio"/>
	Illustrate how a deeper understanding of subject matter can actually enhance problem-solving, critical thinking, and other 21st century skills.	<input checked="" type="radio"/> <input type="radio"/>
	Enable 21st century professional learning communities for teachers that model the kinds of classroom learning that best promotes 21st century skills for students.	<input checked="" type="radio"/> <input type="radio"/>
	Cultivate teachers' ability to identify students' particular learning styles, intelligences, strengths, and weaknesses.	<input checked="" type="radio"/> <input type="radio"/>

Cluster	Indicator Statement	Addressed
<b>Produce Results</b>	Demonstrate additional attributes associated with producing high quality products including the abilities to: Work positively and ethically; manage time and projects effectively; multi-task; participate actively, as well as be reliable and punctual; present oneself professionally and with proper etiquette; collaborate and cooperate effectively with teams; respect and appreciate team diversity; and, be accountable for results.	<input checked="" type="radio"/> <input type="radio"/>

## Leadership & Responsibility

Cluster	Indicator Statement	Addressed
<b>Guide &amp; Lead Others</b>	Use interpersonal and problem-solving skills to influence and guide others toward a goal.	<input checked="" type="radio"/> <input type="radio"/>
	Leverage strengths of others to accomplish a common goal.	<input checked="" type="radio"/> <input type="radio"/>
	Inspire others to reach their very best via example and selflessness.	<input checked="" type="radio"/> <input type="radio"/>
	Demonstrate integrity and ethical behavior in using influence and power.	<input checked="" type="radio"/> <input type="radio"/>
<b>Be Responsible to Others</b>	Act responsibly with the interests of the larger community in mind.	<input checked="" type="radio"/> <input type="radio"/>
	Help teachers develop their abilities to use various strategies (such as formative assessments) to reach diverse students and create environments that support differentiated teaching and learning.	<input checked="" type="radio"/> <input type="radio"/>
	Support the continuous evaluation of students' 21st century skills development.	<input checked="" type="radio"/> <input type="radio"/>
	Encourage knowledge sharing among communities of practitioners, using face-to-face, virtual, and blended communications.	<input checked="" type="radio"/> <input type="radio"/>
	Use a scalable and sustainable model of professional development.	<input checked="" type="radio"/> <input type="radio"/>
<b>21<sup>st</sup> Century Learning Environments</b>	Create learning practices, human support, and physical environments that will support the teaching and learning of 21st century skill outcomes.	<input checked="" type="radio"/> <input type="radio"/>
	Support professional learning communities that enable educators to collaborate, share best practices, and integrate 21st century skills into classroom practice.	<input checked="" type="radio"/> <input type="radio"/>
	Enable students to learn in relevant, real-world 21st century contexts (e.g., through project-based or other applied work).	<input checked="" type="radio"/> <input type="radio"/>
	Allow equitable access to quality learning tools, technologies, and resources.	<input checked="" type="radio"/> <input type="radio"/>

Cluster	Indicator Statement	Addressed
	Provide 21st century architectural and interior designs for group, team, and individual learning.	<input checked="" type="radio"/> <input type="radio"/>
	Support expanded community and international involvement in learning, both face-to-face and online.	<input checked="" type="radio"/> <input type="radio"/>