

# Curriculum Guide

## *Eighth Grade*



Self-Directed  
*Auto-Dirijido*



Innovative  
*Innovador*



Critical Thinker  
*Pensador Crítico*



Collaborative  
*Colaborativo*



Empathetic  
*Empático*



## Introduction

Standards-based teaching and learning is how we approach instruction in Campbell Union School District. In order to best meet the needs of every child, teachers collaboratively engage in cycles of inquiry focused on student learning. Using common formative assessments based on essential standards, they consider the four questions of a Professional Learning Community:

- What do we want our students to learn?
- How do we know our students have learned it?
- What do we do when students don't learn it?
- What do we do when students learn it/already know it?

## Essential Standards

We answer question #1 above by identifying standards students need to master. All standards are not equally significant, however. Some standards have a greater impact beyond the current grade level and are relevant across multiple courses and disciplines. Others seem to deepen understanding and skills only within a certain course or discipline. The most essential standards for every grade level and course have been identified by teams of CUSD teachers, administrators, and instructional coaches using the following criteria:

- **Endurance:** standards that provide students with knowledge and skills beyond a single test date
- **Leverage:** standards that provide knowledge and skills that will be valuable in multiple disciplines or content areas
- **Readiness:** standards that provide knowledge and skills for success in the next grade or level of instruction

CUSD students are exposed to the full and diverse range of standards associated with a grade level or course; however, essential standards clarify areas of acute focus, and guide teachers in decision-making about allocation of instructional time and resources. Essential standards help clarify *what* our students learn, and our [Elements of Quality First Instruction](#) guide teachers in thinking about *how* to ensure students learn:



Learning Targets



Assessments



Differentiation



Responsive Teaching for All

## Evaluation and Reporting

Just as essential standards guide areas of instructional focus, evaluation of student learning leads teachers to dynamic instructional decision-making. Data regarding student successes and

needs are gleaned through a variety of assessments including formative, summative, informal/ “ongoing classroom observation”, and performance tasks. These help to answer PLC question #2. With clear assessment data, teachers then consider next steps for each student relative to deep and rigorous understanding of the standards (PLC questions 3 and 4). Teachers anticipate and plan for successful outcomes for ALL students.

The CUSD Mastery Rubric has been created to assist teachers in identifying next steps for student learning and to guide the reporting of learning outcomes for parents. The essential standards will be listed on student report cards and evaluated using the following mastery rubric:

<b>CUSD Mastery Rubric</b>			
4 Beyond Mastery	3 Mastery	2 Developing	1 Beginning
The student demonstrates not only mastery of the standard but also can make in-depth inferences and applications that go beyond the requirement. The student has no gaps in understanding and makes minimal errors in application.	The student is able to apply the knowledge or skills assessed and can create original work. The student may have some non-critical gaps in understanding or errors in application.	The student is able to recall or reproduce skills of the standard. The student demonstrates some gaps in understanding, significant errors in application, or a need for teacher assistance to complete a task.	The student may or may not be able to recall or reproduce basic knowledge or skills and cannot independently or accurately apply them. The student has significant gaps in understanding, major errors in application, and may require continuous teacher guidance in order to complete a task.

# Eighth Grade Curriculum Guide

This guide is intended to provide clarity about course content including areas of focus in each major content area. While the broad set of knowledge and skills are listed, **essential standards are highlighted in blue.**

## English Language Arts

### Reading - Literature

8.RL.01	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
8.RL.02	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
8.RL.03	Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
8.RL.04	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
8.RL.05	Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
8.RL.06	Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.
8.RL.07	Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.
8.RL.09	Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.
8.RL.10	By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.

## Reading - Informational Text

8.RI.01	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
8.RI.02	Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
8.RI.03	Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).
8.RI.04	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
8.RI.05	Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
8.RI.06	Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
8.RI.07	Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
8.RI.08	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
8.RI.09	Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.
8.RI.10	By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6–8 text complexity band independently and proficiently.

<b>Writing</b>	
8.W.01	Write arguments to support claims with clear reasons and relevant evidence.
8.W.01a	<b>Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.</b>
8.W.01b	<b>Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.</b>
8.W.01c	<b>Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.</b>
8.W.01d	<b>Establish and maintain a formal style.</b>
8.W.01e	<b>Provide a concluding statement or section that follows from and supports the argument presented.</b>
8.W.02	Write informative/explanatory texts, including career development documents (e.g., simple business letters and job applications), to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. CA
8.W.02a	<b>Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</b>
8.W.02b	<b>Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</b>
8.W.02c	<b>Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.</b>
8.W.02d	<b>Use precise language and domain-specific vocabulary to inform about or explain the topic.</b>
8.W.02e	<b>Establish and maintain a formal style.</b>
8.W.02f	<b>Provide a concluding statement or section that follows from and supports the information or explanation presented.</b>
8.W.03	Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
8.W.03a	<b>Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.</b>
8.W.03b	<b>Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.</b>
8.W.03c	<b>Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.</b>
8.W.03d	<b>Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.</b>
8.W.03e	<b>Provide a conclusion that follows from and reflects on the narrated experiences or events.</b>
8.W.04	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

8.W.05	With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
8.W.06	Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
8.W.07	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8.W.08	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
8.W.09	Draw evidence from literary or informational texts to support analysis, reflection, and research.
8.W.09a	Apply grade 8 Reading standards to literature (e.g., “Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new”).
8.W.09b	Apply grade 8 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced”).
8.W.10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.



## Speaking & Listening

8.SL.01	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher- led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
8.SL.01a	<b>Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.</b>
8.SL.01b	<b>Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.</b>
8.SL.01c	<b>Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.</b>
8.SL.01d	<b>Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.</b>
8.SL.02	Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
8.SL.03	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
8.SL.04.	Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation; utilize multimedia components to support delivery.
8.SL.05	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims, evidence, and add interest.
8.SL.06	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

<b>Language</b>	
8.L.01	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
	<b>Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.</b>
8.L.01b	<b>Form and use verbs in the active and passive voice.</b>
8.L.01c	<b>Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.</b>
8.L.01d	<b>Recognize and correct inappropriate shifts in verb voice and mood.</b>
8.L.02	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
8.L.02a	<b>Use punctuation (comma, ellipsis, dash) to indicate a pause or break.</b>
8.L.02b	<b>Use an ellipsis to indicate an omission.</b>
8.L.02c	<b>Spell correctly.</b>
8.L.03	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
8.L.03a	Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).
8.L.04	Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.
8.L.04a	Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
8.L.04b	Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, secede).
8.L.04c	Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
8.L.04d	Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
8.L.05	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
8.L.05a	<b>Interpret figures of speech (e.g. verbal irony, puns) in context.</b>
8.L.05b	<b>Use the relationship between particular words to better understand each of the words.</b>
8.L.05c	<b>Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).</b>
8.L.06	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

## English Language Development

The full range of California English Language Development Standards include a comprehensive set of learning outcomes for interacting in meaningful ways in English and learning about how English works. Listed below are only the ELD standards identified as essential for how to interact in meaningful ways in English. All of the standards focusing on how English works are essential and needed for students to develop fluency in English. Successes in mastery of these standards are reported only for English Learners.

	<b>Emerging</b>	<b>Expanding</b>	<b>Bridging</b>	
ELD.PI.8.1	Engage in conversational exchanges and express ideas on familiar topics by asking and answering <i>yes-no</i> and <i>wh-</i> questions and responding using simple phrases.	Contribute to class, group, and partner discussions by following turn-taking rules, asking relevant questions, affirming others, adding relevant information, and paraphrasing key ideas.	Contribute to class, group, and partner discussions by following turn-taking rules, asking relevant questions, affirming others, adding relevant information and evidence, paraphrasing key ideas, building on responses, and providing useful feedback.	<b>Exchanging Information and Ideas</b>
ELD.PI.8.4	Adjust language choices according to social setting (e.g., classroom, break time) and audience (e.g., peers, teacher).	Adjust language choices according to purpose (e.g., explaining, persuading, entertaining), task, and audience.	Adjust language choices according to task (e.g., facilitating a science experiment, providing peer feedback on a writing assignment), purpose, and audience.	<b>Adapting Language Choices</b>
ELD.PI.8.6	<p>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/contrast, cause/effect, problem/solution) based on close reading of a variety of grade-appropriate texts and viewing of multimedia, with substantial support.</p> <p>b. Express inferences and conclusions drawn based on close reading of grade-appropriate texts and viewing of multimedia using some frequently used verbs (e.g., <i>shows that, based on</i>).</p> <p>c. Use knowledge of morphology (e.g., affixes, roots, and base</p>	<p>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/contrast, cause/effect, problem/solution) based on close reading of a variety of grade-appropriate texts and viewing of multimedia, with moderate support.</p> <p>b. Express inferences and conclusions drawn based on close reading of grade-appropriate texts and viewing of multimedia using a variety of verbs (e.g., <i>suggests that, leads to</i>).</p> <p>c. Use knowledge of morphology (e.g., affixes, roots, and base words), context, reference materials, and visual cues</p>	<p>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/contrast, cause/effect, problem/solution) based on close reading of a variety of grade-level texts and viewing of multimedia, with light support.</p> <p>b. Express inferences and conclusions drawn based on close reading of grade-level texts and viewing of multimedia using a variety of precise academic verbs (e.g., <i>indicates that, influences</i>).</p> <p>c. Use knowledge of morphology (e.g., affixes, roots, and base words), context, reference materials, and visual cues to determine the meanings, including figurative and connotative meanings, of unknown and multiple-meaning</p>	<b>Reading and Viewing Closely</b>

	words), context, reference materials, and visual cues to determine the meaning of unknown and multiple-meaning words on familiar topics.	to determine the meaning of unknown and multiple-meaning words on familiar and new topics.	words on a variety of new topics.	
ELD.PI.8.10	<p>a. Write short literary and informational texts (e.g., an argument about whether the government should fund research using stem cells) collaboratively (e.g., with peers) and independently.</p> <p>b. Write brief summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).</p>	<p>a. Write longer literary and informational texts (e.g., an argument about whether the government should fund research using stem cells) collaboratively (e.g., with peers) and independently using appropriate text organization.</p> <p>b. Write increasingly concise summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).</p>	<p>a. Write longer and more detailed literary and informational texts (e.g., an argument about whether the government should fund research using stem cells) collaboratively (e.g., with peers) and independently using appropriate text organization and growing understanding of register.</p> <p>b. Write clear and coherent summaries of texts and experiences using complete and concise sentences and key words (e.g., from notes or graphic organizers).</p>	<b>Writing</b>
ELD.PI.8.11	<p>a. Justify opinions by providing some textual evidence or relevant background knowledge, with substantial support.</p> <p>b. Express attitude and opinions or temper statements with familiar modal expressions (e.g., <i>can, may</i>).</p>	<p>a. Justify opinions or persuade others by providing relevant textual evidence or relevant background knowledge, with moderate support.</p> <p>b. Express attitude and opinions or temper statements with a variety of familiar modal expressions (e.g., <i>possibly/likely, could/would</i>).</p>	<p>a. Justify opinions or persuade others by providing detailed and relevant textual evidence or relevant background knowledge, with light support.</p> <p>b. Express attitude and opinions or temper statements with nuanced modal expressions (e.g., <i>potentially/certainly/absolutely, should/might</i>).</p>	<b>Justifying and Arguing</b>
ELD.PI.8.12	a. Use a select number of general academic words (e.g., <i>specific, contrast</i> ) and domain-specific words (e.g., <i>scene, cell, fraction</i> ) to create some precision while speaking and writing.	a. Use a growing set of academic words (e.g., <i>specific, contrast, significant, function</i> ), domain-specific words (e.g., <i>scene, irony, suspense, analogy, cell membrane, fraction</i> ), synonyms, and antonyms to create	a. Use an expanded set of general academic words (e.g., <i>specific, contrast, significant, function, adequate, analysis</i> ), domain-specific words (e.g., <i>scene, irony, suspense, analogy, cell membrane, fraction</i> ), synonyms, antonyms, and figurative language to create	<b>Selecting Language Resources</b>

	<p>b. Use knowledge of morphology to appropriately select affixes in basic ways (e.g., <i>She likes X. He walked to school</i>).</p>	<p>precision and shades of meaning while speaking and writing.</p> <p>b. Use knowledge of morphology to appropriately select affixes in a growing number of ways to manipulate language (e.g., <i>She likes walking to school. That's impossible</i>).</p>	<p>precision and shades of meaning while speaking and writing.</p> <p>b. Use knowledge of morphology to appropriately select affixes in a variety of ways to manipulate language (e.g., changing <i>destroy</i> to <i>destruction</i>, <i>probably</i> to <i>probability</i>, <i>reluctant</i> to <i>reluctantly</i>).</p>	
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# Mathematics

## The Number System

8.NS.01	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
8.NS.02	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions. For example, by truncating the decimal expansion of $\sqrt{2}$ , show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

## Expressions and Equations

8.EE.01	Know and apply the properties of integer exponents to generate equivalent numerical expressions.
8.EE.02	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
8.EE.03	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
8.EE.04	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
8.EE.05	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
8.EE.06	Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .
8.EE.07	Solve linear equations in one variable.
8.EE.07a	Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$ , $a = a$ , or $a = b$ results (where $a$ and $b$ are different numbers).

8.EE.07b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
8.EE.08	<b>Analyze and solve pairs of simultaneous linear equations.</b>
8.EE.08a	Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
8.EE.08b	<b>Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, <math>3x + 2y = 5</math> and <math>3x + 2y = 6</math> have no solution because <math>3x + 2y</math> cannot simultaneously be 5 and 6.</b>
8.EE.08c	<b>Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.</b>

## Functions

8.F.01	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
8.F.02	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.
8.F.03	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
8.F.04	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two $(x, y)$ values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
8.F.05	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

<b>Geometry</b>	
8.G.01	Verify experimentally the properties of rotations, reflections, and translations.
8.G.01a	Lines are taken to lines, and line segments to line segments of the same length.
8.G.01b	Angles are taken to angles of the same measure.
8.G.01c	Parallel lines are taken to parallel lines.
8.G.02	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
8.G.03	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
8.G.04	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
8.G.05	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.
8.G.06	Explain a proof of the Pythagorean Theorem and its converse.
8.G.07	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8.G.08	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.
8.G.09	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

<b>Statistics and Probability</b>	
8.SP.01	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
8.SP.02	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
8.SP.03	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr. as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.
8.SP.04	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.



# Science

## Science and Engineering Practices

8.SEP.1	Ask questions about what would happen if a variable is changed; identify scientific (testable) and non-scientific (non-testable) questions; ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships; use prior knowledge to describe problems that can be solved; define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost.	<b>Asking Questions and Defining Problems</b>
8.SEP.2	Identify limitations of models, collaboratively develop and/or revise a model based on evidence that shows the relationships among variables for frequent and regular occurring events; develop a model using an analogy, example, or abstract representation to describe a scientific principle or design solution; develop and/or use models to describe and/or predict phenomena; develop a diagram or simple physical prototype to convey a proposed object, tool, or process; use a model to test cause and effect relationships or interactions concerning the functioning of a natural or designed system.	<b>Developing and Using Models</b>
8.SEP.3	Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered; evaluate appropriate methods and/or tools for collecting data; make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution; make predictions about what would happen if a variable changes; test two different models of the same proposed object, tool, or process to determine which better meets criteria for success.	<b>Planning and Carrying Out Investigations</b>
8.SEP.4	Analyzing and interpreting data.	
8.SEP.5	Using mathematics and computational thinking.	
8.SEP.6	Constructing explanations (for science) and designing solutions (for engineering).	
8.SEP.7	Compare and refine arguments based on an evaluation of the evidence presented; distinguish among facts, reasoned judgment based on research findings, and speculation in an explanation; respectfully provide and receive critiques from peers about a proposed procedure, explanation, or model by citing relevant evidence and posing specific questions; construct and/or support an argument with evidence, data, and/or a model; use data to evaluate claims about cause and effect; make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem.	<b>Engaging in Argument from Evidence</b>
8.SEP.8	Obtaining, evaluating, and communicating information.	

## Science Content

8.LS3-1	Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.	<b>Life Science</b>
8.LS4-1	Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.	
8.LS4-2	Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.	
8.LS4-3	Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.	
8.LS4-4	Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	
8.LS4-5	Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.	
8.LS4-6	Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.	
8.ESS1-1	Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	<b>Earth &amp; Space Science</b>
8.ESS1-2	Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.	
8.ESS1-3	Analyze and interpret data to determine scale properties of objects in the solar system.	
8.ESS1-4	Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.	
8.ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	

8.PS2-1	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	<b>Physical Science</b>
8.PS2-2	Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	
8.PS2-4	Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	
8.PS2-5	Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact	
8.PS3-1	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	
8.PS3-2	Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	<b>Engineering (STEAM)</b>
8.ETS1-3	Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	

## Digital Literacy

CUSD students are learning to think critically about the web and build their digital literacy skills through their use of technology. In eighth grade, students will answer these essential questions:

1. What are ways that media and technology can be used to distort, exaggerate and misrepresent information?
2. What are my rights and responsibilities as a “digital citizen”?
3. How do I effectively and efficiently use digital tools and the web to create, collaborate, problem solve, and communicate my learning?

## Physical Education

Goal 1	<b>Manipulative Skills</b> Overhand Throw Striking Dribble	General Movement Concepts
Goal 2	<b>Transfer of Movement Skills to Other Physical Activities</b> 1.3 / 1.4 / 2.1	Movement Concepts
Goal 3	<b>Knowledge and Self Assessment</b> 3.1 <b>Body Composition</b>	Fitness Concepts
Goal 4	<b>Identify and Apply</b> 4.3 <b>Aerobic Capacity</b> <b>Muscular Strength/Endurance</b> <b>Flexibility</b>	Fitness Concepts
Goal 5	<b>Social Responsibility</b> 5.2 <b>Social Interaction</b> <b>Group Dynamics</b> 5.7	Social Interaction Concepts



## Collaborative

### Collaboration Definition:

Learners who are collaborative systematically and interdependently work towards a common goal while communicating and being flexible throughout the exchange of ideas.

### Skills and Behaviors/ Dispositions:

- Listening: Actively hear, paraphrase, and summarize other's ideas to deeply understand alternative or competing perspectives.
- Contributing: Offer new, radical, and sometimes unpopular views.
- Accept and provide growth oriented feedback: Specific feedback that guides individuals toward mastery of individual efforts rather than performance or compliance.
- Committing to work through conflict: Productively engage in and move through conflict.
- Consensus Building: Find ways to compromise to provide solutions.

#### TK-2 Learning Targets

1. I can receive feedback with an open mind.
2. I can listen to and ask questions of others to get their ideas.
3. I can share in a positive way with my partner or team.

#### 3rd - 5th Grade Learning Targets

1. I can give and receive feedback that is respectful, specific, and helpful.
2. I can respectfully listen to, consider, and build on different points of view.
3. I can adapt to various working situations.
4. I can productively contribute to the group.
5. I can present information about a topic of choice in multiple ways.

#### 6th-8th Grade Learning Targets

1. I can internalize feedback received to contribute to a collaborative conversation.
2. I can work interdependently with my team in a respectful manner to reach a common goal.
3. I can respectfully agree/disagree with ideas instead of people.
4. I can apply productive feedback from others.
5. I can actively listen to ensure that all team members are equally heard.



Empathetic

### **Empathetic Definition:**

Learners who are empathetic are socially aware and able to respond appropriately to the needs of multiple perspectives.

### **Skills and Behaviors:**

- Sensitivity to other's emotions: Develop an "emotional radar" to pick up on what people are feeling by watching body language and facial expressions to pick up on any meaning they are showing transparently.
- Self Awareness: Understand how your emotions or feelings may be affecting your thoughts and actions.
- Open-Mindedness: Allow yourself to be influenced by the thoughts and feelings of others.
- Imagination/Curiosity: Think about what it would be like to be in their shoes and take time to be curious about what people think to understand their point of view.

### **Learning Target Progression:**

#### TK -2 Learning Targets

1. I can recognize what someone else may be thinking and feeling.
2. I can describe how my actions impact others.
3. I can treat others with respect and kindness.
4. I can listen with my eyes, ears, and heart.

#### 3rd - 5th Grade Learning Targets

1. I can offer help when someone is in need.
2. I can respond appropriately to the feelings of others.
3. I can actively listen to understand another point of view.
4. I can recognize that everyone has different experiences which contribute to who they are and their view of the world.

#### 6th-8th Grade Learning Targets

1. I can offer help when someone is in need.
2. I can anticipate how others might respond to my actions.
3. I can actively listen to understand another point of view.
4. I can apply my understanding of multiple perspectives and individual differences in various contexts.
5. I can stand up for others when I see mistreatment in and outside the classroom.



**Self-Directed Definition:**

Learners who are self-directed continuously assess their present state of being and plan and execute steps to continue growing.

**Skills and Behaviors:**

- Focus on goals: Set individual growth goals and create steps to achieve them.
- Focus on strengths: Learn and capitalize on individual strengths.
- Knowing what to do when you don't know: Embrace uncertainty with questions and a commitment to pursue information and next steps.
- Perseverance: Continuing to push through challenges

**Learning Target Progression:**

TK-2 Learning Targets <ol style="list-style-type: none"><li>1. I can make a plan to finish what I start.</li><li>2. I can explore different learning strategies.</li><li>3. I can select resources to support my learning goal.</li><li>4. I can ask questions to help me understand.</li><li>5. I can try again when learning is hard.</li></ol>
3rd - 5th Grade Learning Targets <ol style="list-style-type: none"><li>1. I can set goals for my learning needs.</li><li>2. I can choose a strategy to support my learning goals.</li><li>3. I can seek help in an appropriate way from reliable sources to complete tasks.</li><li>4. I can ask deeper questions to help me understand.</li><li>5. I can persevere when learning gets tough.</li></ol>
6th-8th Grade Learning Targets <ol style="list-style-type: none"><li>1. I can set goals for my own learning with steps that help me manage projects and accomplish tasks.</li><li>2. I can identify and use learning strategies that work best for me.</li><li>3. I take initiative to use the resources available to me when I don't understand something.</li><li>4. I can engage in inquiry to extend my learning.</li><li>5. I can persevere through difficult tasks and situations and adjust my goals as needed.</li></ol>



## A Critical Thinker

### Critical Thinker Definition:

Learners who are critical thinkers question their current level of understanding and work to deepen or challenge that understanding.

### Skills and Behaviors:

- Investigation: Ask questions and formulate a process for problem solving
- Analyzing and Interpreting: Identify and define a specific problem
- Sourcing: Discern the reliability of information and distinguish fact from opinion.
- Connecting: See patterns and create connections
- Drawing Conclusions: Use information that is implied or inferred to make a judgement, summarize information to assess your next steps

### Learning Target Progression:

#### TK -2 Learning Targets

1. I can ask a question.
2. I can discover and understand different sources of information and how to apply them.
3. I can use information from other sources to form my own ideas.
4. I can say why an idea is a good one.
5. I can make related connections.

#### 3rd - 5th Grade Learning Targets

1. I can ask questions that further my understanding.
2. I can evaluate the credibility and relevance of a source.
3. I can incorporate sources from multiple perspectives.
4. I can analyze details within the content I am studying to extract important information to support my learning/understanding.
5. I can make connections between academic and real-world concepts.

#### 6th-8th Grade Learning Targets

1. I can ask questions to deepen knowledge, find the optimal solution, and improve.
2. I can evaluate evidence and the credibility of the sources.
3. I can consider multiple sources of information in order to gain perspective and identify my own and other's bias.
4. I can analyze and generate multiple solutions to the same problem.
5. I can connect ideas, themes, and applications, to related and unrelated concepts.





**Innovative Definition:**

Learners who are innovative surpass conventional thinking and take risks to develop something unique and new to creatively meet another’s needs.

**Skills and Behaviors:**

- Displaying Curiosity: Notice, ask questions, and observe
- Synthesizing: Blend ideas from competing or unrelated perspectives to create something new.
- Creativity: Perceive the world in new ways, find hidden patterns, and make connections between unrelated phenomena
- Contribute: Offer ideas, learn from failure, and learn from others

**Learning Target Progression:**

<p>TK-2 Learning Targets</p> <ol style="list-style-type: none"><li>1. I can make mistakes and learn from them.</li><li>2. I can use my imagination to think about new ideas.</li><li>3. I can brainstorm.</li><li>4. I can look for creative solutions when faced with a set back.</li><li>5. I can contribute ideas to improve my community.</li></ol>
<p>3rd - 5th Grade Learning Targets</p> <ol style="list-style-type: none"><li>1. I can take creative risks knowing I will be able to learn from my failures.</li><li>2. I can revise and refine my ideas.</li><li>3. I can brainstorm beyond the most common ideas.</li><li>4. I can look at problems as design opportunities.</li><li>5. I can offer solutions to community and real-world problems.</li></ol>
<p>6th-8th Grade Learning Targets</p> <ol style="list-style-type: none"><li>1. I can demonstrate a rapid prototyping process, learning from each phase.</li><li>2. I can connect new information as I work to refine my ideas.</li><li>3. I can build on and elaborate on others’ ideas through a brainstorming process.</li><li>4. I can create through the designing and engineering process.</li><li>5. I can find creative solutions within real-world criteria and constraints.</li></ol>



# SOCIAL AND EMOTIONAL LEARNING (SEL) COMPETENCIES

## SELF-AWARENESS

The ability to accurately recognize one's own emotions, thoughts, and values and how they influence behavior. The ability to accurately assess one's strengths and limitations, with a well-grounded sense of confidence, optimism, and a "growth mindset."

- ⇒ Identifying emotions
- ⇒ Accurate self-perception
- ⇒ Recognizing strengths
- ⇒ Self-confidence
- ⇒ Self-efficacy

## SELF-MANAGEMENT

The ability to successfully regulate one's emotions, thoughts, and behaviors in different situations — effectively managing stress, controlling impulses, and motivating oneself. The ability to set and work toward personal and academic goals.

- ⇒ Impulse control
- ⇒ Stress management
- ⇒ Self-discipline
- ⇒ Self-motivation
- ⇒ Goal setting
- ⇒ Organizational skills

## SOCIAL AWARENESS

The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

- ⇒ Perspective-taking
- ⇒ Empathy
- ⇒ Appreciating diversity
- ⇒ Respect for others

## RELATIONSHIP SKILLS

The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed.

- ⇒ Communication
- ⇒ Social engagement
- ⇒ Relationship building
- ⇒ Teamwork

## RESPONSIBLE DECISION-MAKING

The ability to make constructive choices about personal behavior and social interactions based on ethical standards, safety concerns, and social norms. The realistic evaluation of consequences of various actions, and a consideration of the well-being of oneself and others.

- ⇒ Identifying problems
- ⇒ Analyzing situations
- ⇒ Solving problems
- ⇒ Evaluating
- ⇒ Reflecting
- ⇒ Ethical responsibility



