

California's  
**COMMON CORE**

Content Standards  
Curriculum Builder  
Sixth Grade

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Curriculum Builder for  
ELA and Mathematics  
Sixth Grade

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# CALIFORNIA'S COMMON CORE CONTENT STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY IN HISTORY/SOCIAL STUDIES, SCIENCE AND TECHNICAL SUBJECTS

## **The History of Standards in California**

Student content standards describe what students should know and be able to do in a subject matter for a particular grade. California ushered in the standards era in 1997, when the State Board of Education adopted contents standards, K-12, for both English Language Arts and mathematics, establishing for the first time in the State a consistent set of expectations for all students. Those standards have stood as the beacon for the development of curriculum frameworks, the creation of curricular materials, and the basis for State and local assessments.

While California established and utilized its own standards, every other state in the union did the same. Seeking uniformity of rigor and expectation for the entire nation, the National Governors Association Center for Best Practices and the Council of chief State School Officers coordinated efforts to write the Common core State Standards. Teachers, school administrators, and experts began the work with the end in mind and drafted “career and college ready” exit standards for graduated high school seniors. As such these anchor standards define what is required to be successful in entry-level, credit-bearing academic college courses and in the workforce training programs. With exit standards charting the way, the creators of the Common Core standards backward-mapped down through the grade levels to create a consistent format and strong linkages from grade level to grade level.

These new Common Core Standards, adopted for English language arts and mathematics only:

- Are aligned with college and work expectations
- Are clear, understandable, and consistent
- Include rigorous content and application of knowledge through higher-order skills
- Build upon strengths and lessons of the current standards from many states
- Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society
- Are evidence-based

## **Transition to the Common Core Standards**

The State Board of Education in California adopted the Common Core Standards in 2010 to ensure that California would be eligible as a state to submit an application for a Race to the Top grant. Even though that application was not selected for funding, the adoption of the Common Core Standards is in law. Currently, 47 states have adopted the standards. It is the advent of assessments tied to the Common Core, however, that will mark the true transition from the older California standards to the current Common

Core. California participates with over twenty other states in the SMARTER Balanced Assessment Consortium. Linking arms with other states in the consortium, California plans to usher in a totally new assessment system in the spring of the school year 2014-15. The implementation of a new assessment system will mark point in time when students, teachers, schools, districts and larger systems will be held accountable for the instruction of these new standards.

In order to create as smooth a transition as possible from the old standards and the current assessment system, teachers and administrators are working to understand and embrace the Common Core Standards. This publication is designed to assist with that process.

### **The new Common Core Standards for English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects**

The title of the standards includes other fields of study responsible for student literacy. In the K-5 standards, references to history/social studies, science and technical subjects are embedded. In the upper grade level standards, these content areas have their own section of standards. The inclusion across traditional divisions of study reinforces the primacy of literacy and the need for its integration.

**Reading standards** are “stair-cased” and demand student reading of a diverse array of classic and contemporary literature, but likewise insist on a focus of challenging informational texts. There is no specified reading list, but the Common Core instead provide numerous sample texts. Various genre are delineated that include: myths, foundational documents from U. S. history, seminal works of American literature, and, of course, Shakespeare. States, local districts, and perhaps even schools will make the final decisions about what titles students will read.

The issue of text complexity reminds educators that the reading level of work place documents frequently

exceeds the rigor of literature at the college level. Therefore, the measurement called the “lexile” gauges the text complexity of a document. Text complexity intertwines the issues of: qualitative dimensions (structure of language, knowledge demands, etc.), quantitative dimensions (word length, sentence length, etc.), and reader and task considerations (appropriateness of text to reader, reader motivation and experiences, etc.)

**Writing standards** are grounded in the ability to write logical arguments based on claims, sound reasoning, and relevant evidence. Even the earliest grades require the ability to argue through opinion writing. Additionally, students are expected to conduct research, both short- and long-term projects, throughout the grade levels. To establish a consistent expectation for rigor, annotated samples of student writing across the grade levels accompany the standards.

**Speaking and Listening standards** require the presentation of complex information through the acts of listening and speaking but also through media. Speaking is expected between individuals, in small groups and in larger groups.

**Language standards** describe vocabulary acquisition and the ability to appreciate nuances of words. In addition to the use of formal language, students are expected to navigate through a variety of contexts and choose the appropriate level of formality.

**Media and Technology standards** are integrated through these standards.

**Implementation:** We are launching into CCSS using the curriculum and the materials we have. Whether your district is using Open Court, MMH, or another program, we must begin CCSS implementation using our existing materials.

As you proceed through your pacing guide and current curriculum, compare each lesson to the standards found here. Use the notes column to document which parts of your current curriculum is relevant to each standard.

# READING LITERATURE

## Key Ideas and Details

Standard		Notes	Dates Taught					Mastery
RL 1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.							
RL 2.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.							
RL 3.	Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.							

## Craft and Structure

Standard		Notes	Dates Taught					Mastery
RL 4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.							
RL 5.	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.							
RL 6.	Explain how an author develops the point of view of the narrator or speaker in a text.							

## Integration of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
RL 7.	Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.							

## Integration of Knowledge and Ideas

Standard	Notes	Dates Taught					Mastery
RL 8. (Not applicable to literature)							
RL 9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.							

## Range of Reading and Level of Text Complexity

Standard	Notes	Dates Taught					Mastery
RL 10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.							

## READING INFORMATIONAL TEXT

### Key Ideas and Details

Standard	Notes	Dates Taught					Mastery
RI 1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.							
RI 2. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.							
RI 3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).							

## Craft and Structure

Standard		Notes	Dates Taught					Mastery
RI 4.	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.							
RI 5.	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.							
RI 6.	Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.							

## Integration of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
RI 7.	Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.							
RI 8.	Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.							
RI 9.	Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).							

## Range of Reading and Level of Text Complexity

Standard		Notes	Dates Taught					Mastery
RI 10.	By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.							

Standard		Notes	Dates Taught					Mastery
W 1.	Write arguments to support claims with clear reasons and relevant evidence.							
W 1.a	Introduce claim(s) and organize the reasons and evidence clearly.							
W 1.b	Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.							
W 1.c	Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.							
W 1.d	Establish and maintain a formal style.							
W 1.e	Provide a concluding statement or section that follows from the argument presented.							
W 2.	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.							
W 2.a	Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.							
W 2.b	Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.							
W 2.c	Use appropriate transitions to clarify the relationships among ideas and concepts.							
W 2.d	Use precise language and domain-specific vocabulary to inform about or explain the topic.							

## Text Types and Purposes

Standard		Notes	Dates Taught					Mastery
W 2.e	Establish and maintain a formal style.							
W 2.f	Provide a concluding statement or section that follows from the information or explanation presented.							
W 3.	Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.							
W 3.a	Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.							
W 3.b	Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.							
W 3.c	Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.							
W 3.d	Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.							
W 3.e	Provide a conclusion that follows from the narrated experiences or events.							

## Production and Distribution of Writing

Standard		Notes	Dates Taught					Mastery
W 4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)							

## Production and Distribution of Writing

Standard	Notes	Dates Taught					Mastery
W 5. 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.							
W 6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.							

## Research to Build and Present Knowledge

Standard	Notes	Dates Taught					Mastery
W 7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.							
W 8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.							
W 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.							
W 9.a Apply grade 6 Reading standards to literature (e.g., “Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics”).							
W 9.b Apply grade 6 Reading standards to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not”).							

## Range of Writing

Standard	Notes	Dates Taught					Mastery
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

### Comprehension and Collaboration

Standard	Notes	Dates Taught					Mastery
SL 1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.							
SL 1.a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.							
SL 1.b Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.							
SL 1.c Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.							
SL 1.d Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.							
SL 2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.							

## Presentation of Knowledge and Ideas

Standard	Notes	Dates Taught					Mastery
SL 3. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.							
SL 4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.							
SL 5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.							
SL 6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.							

## LANGUAGE STANDARDS

### Conventions of Standard English

Standard	Notes	Dates Taught					Mastery
L 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.							
L 1.a Ensure that pronouns are in the proper case (subjective, objective, possessive).							
L 1.b Use intensive pronouns (e.g., myself, ourselves).							

## Conventions of Standard English

Standard		Notes	Dates Taught					Mastery
L 1.c	Recognize and correct inappropriate shifts in pronoun number and person.							
L 1.d	Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).							
L 1.e	Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.							
L 2.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.							
L 2.a	Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.							
L 2.b	Spell correctly.							

## Knowledge of Language

Standard		Notes	Dates Taught					Mastery
L 3.	Use knowledge of language and its conventions when writing, speaking, reading, or listening.							
L 3.a	Vary sentence patterns for meaning, reader/listener interest, and style.							
L 3.b	Maintain consistency in style and tone.							

## Vocabulary Acquisition and Use

Standard		Notes	Dates Taught					Mastery
L 4.	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.							
L 4.a	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.							
L 4.b	Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).							
L 4.c	Consult 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.							
L 4.d	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).							
L 5.	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.							
L 5.a	Interpret figures of speech (e.g., personification) in context.							
L 5. b	Use the relationship between particular words (e.g., cause/ effect, part/whole, item/ category) to better understand each of the words.							
L 5.c	Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, un wasteful, thrifty).							

## Vocabulary Acquisition and Use

Standard	Notes	Dates Taught					Mastery
L 6. 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.							

# CALIFORNIA'S COMMON CORE CONTENT STANDARDS FOR MATHEMATICS

The K-5 standards provide students with a *solid foundation in whole numbers, addition, subtraction, multiplication, division, fractions and decimals*—which help young students build the foundation to successfully apply more demanding math concepts and procedures, and move into applications.

In kindergarten, the standards follow successful international models and recommendations from the National Research Council's Early Math Panel report, by focusing kindergarten work on the number core: learning how numbers correspond to quantities, and learning how to put numbers together and take them apart (the beginnings of addition and subtraction).

The K-5 standards build on the best state standards to provide detailed guidance to teachers on how to navigate their way through knotty topics such as *fractions, negative numbers, and geometry*, and do so by maintaining a continuous progression from grade to grade.

The standards stress not only procedural skill but also conceptual understanding, to make sure students are learning and absorbing the critical information they need to succeed at higher levels - rather than the current practices by which many students learn enough to get by on the next test, but forget it shortly thereafter, only to review again the following year.

Having built a strong foundation K-5, students can do hands on learning in geometry, algebra and probability and statistics. Students who have completed 7th grade and mastered the content and skills through the 7th grade will be *well-prepared for algebra* in grade 8.

# RATIOS & PROPORTIONAL RELATIONSHIPS

Understand ratio

concepts and use ratio reasoning to solve problems.

Standard	Notes	Dates Taught					Mastery
<p>RP 1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”</p>							
<p>RP 2. Understand the concept of a unit rate <math>a/b</math> associated with a ratio <math>a:b</math> with <math>b \neq 0</math>, and use rate language in the context of a ratio relationship. For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is <math>3/4</math> cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.” Expectations for unit rates in this grade are limited to non-complex fractions.</p>							
<p>RP 3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.</p>							
<p>RP 3.a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.</p>							
<p>RP 3.b Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</p>							
<p>RP 3.c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means <math>30/100</math> times the quantity); solve problems involving finding the whole, given a part and the percent.</p>							

## Understand ratio concepts and use ratio reasoning to solve problems.

Standard	Notes	Dates Taught					Mastery
RP 3.d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.							

## THE NUMBER SYSTEM

### Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Standard	Notes	Dates Taught					Mastery
NS 1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$ . (In general, $(a/b) \div (c/d) = ad/bc$ .) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi? Compute fluently with multi-digit numbers and find common factors and multiples.							

## Compute fluently with multi-digit numbers and find common factors and multiples.

Standard	Notes	Dates Taught					Mastery
NS 2. Fluently divide multi-digit numbers using the standard algorithm.							
NS 3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.							
NS 4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express $36 + 8$ as $4(9 + 2)$ . Apply and extend previous understandings of numbers to the system of rational numbers.							

## Apply and extend previous understandings of numbers to the system of rational numbers.

Standard	Notes	Dates Taught					Mastery
NS 5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.							
NS 6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.							

## Apply and extend previous understandings of numbers to the system of rational numbers.

Standard	Notes	Dates Taught					Mastery
<p>NS 6.a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., <math>-(-3) = 3</math>, and that 0 is its own opposite.</p>							
<p>NS 6.b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</p>							
<p>NS 6.c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</p>							
<p>NS.7. Understand ordering and absolute value of rational numbers.</p>							
<p>NS 7.a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret <math>-3 &gt; -7</math> as a statement that <math>-3</math> is located to the right of <math>-7</math> on a number line oriented from left to right.</p>							
<p>NS 7.b Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write <math>-3^{\circ}\text{C} &gt; -7^{\circ}\text{C}</math> to express the fact that <math>-3^{\circ}\text{C}</math> is warmer than <math>-7^{\circ}\text{C}</math>.</p>							
<p>NS 7.c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of <math>-30</math> dollars, write <math> -30  = 30</math> to describe the size of the debt in dollars.</p>							

Apply and extend previous understandings of numbers to the system of rational numbers.

Standard	Notes	Dates Taught					Mastery
NS 8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.							

**EXPRESSIONS & EQUATIONS**

Apply and extend previous understandings of arithmetic to algebraic expressions.

Standard	Notes	Dates Taught					Mastery
EE.1. Write and evaluate numerical expressions involving whole-number exponents.							
EE.2. Write, read, and evaluate expressions in which letters stand for numbers.							
EE 2.a Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$ .							
EE 2.b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.							

## Apply and extend previous understandings of arithmetic to algebraic expressions.

Standard	Notes	Dates Taught					Mastery
<p>EE 2.c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas <math>V = s^3</math> and <math>A = 6s^2</math> to find the volume and surface area of a cube with sides of length <math>s = \frac{1}{2}</math>.</p>							
<p>EE 3. Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression <math>3(2 + x)</math> to produce the equivalent expression <math>6 + 3x</math>; apply the distributive property to the expression <math>24x + 18y</math> to produce the equivalent expression <math>6(4x + 3y)</math>; apply properties of operations to <math>y + y + y</math> to produce the equivalent expression <math>3y</math>.</p>							
<p>EE 4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions <math>y + y + y</math> and <math>3y</math> are equivalent because they name the same number regardless of which number <math>y</math> stands for. Reason about and solve one-variable equations and inequalities.</p>							

## Reason about and solve one-variable equations and inequalities.

Standard	Notes	Dates Taught					Mastery
EE 5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.							
EE 6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.							
EE 7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which $p$ , $q$ and $x$ are all nonnegative rational numbers.							
EE 8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.							

## Represent and analyze quantitative relationships between dependent and independent variables.

Standard	Notes	Dates Taught					Mastery
<p>EE 9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation <math>d = 65t</math> to represent the relationship between distance and time.</p>							

## GEOMETRY

## Solve real-world and mathematical problems involving area, surface area, and volume.

Standard	Notes	Dates Taught					Mastery
<p>G 1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>							
<p>G.2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas <math>V = l w h</math> and <math>V = b h</math> to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p>							

## Solve real-world and mathematical problems involving area, surface area, and volume.

Standard	Notes	Dates Taught					Mastery
G 3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.							
G 4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.							

## STATISTICS & PROBABILITY

## Develop understanding of statistical variability.

Standard	Notes	Dates Taught					Mastery
SP 1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.							
SP 2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.							
SP 3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.							

## Summarize and describe distributions.

Standard	Notes	Dates Taught					Mastery
SP 4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.							
SP 5. Summarize numerical data sets in relation to their context, such as by:							
SP 5.a Reporting the number of observations.							
SP 5.b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.							
SP 5.c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.							
SP 5.d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.							

