California's

COMMON CORE

Content Standards

Curriculum Builder

Seventh Grade

Designed and Printed by Shoob Photography

California's

COMMON CORE

Content Standards Checklist for ELA and Mathematics Seventh Grade

TABLE OF CONTENTS

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 several pieces of 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 analyze its development over the course of the text; provide an objective summary of the text.							
RL 3.	Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).							
Notes								

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 rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.							
RL 5.	Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.							
RL 6.	Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.							
Notes								

Integration of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
RL 7.	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).							
Notes								

Integration of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
RL 8.	(Not applicable to literature)							
RL 9.	Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.							
Notes								

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.							
Notes								

READING INFORMATIONAL TEXT

Key Ideas and Details

Standard		Notes	Dates Taught					Mastery
RI 1.	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.							
RI 2.	Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.							
RI 3.	Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).							
Notes								

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; analyze the impact of a specific word choice on meaning and tone.							
RI 5.	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.							
RI 6.	Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.							
Notes								

Integration of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
RI 7.	Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).							
RI 8.	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.							
RI 9.	Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.							
Notes								

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.							
Notes								

WRITING

Text Types and Purposes

Standard		Notes	Dates Taught					Mastery
W 1.	Write arguments to support claims with clear reasons and relevant evidence.							
W 1.a	Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.							
W 1.b	Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.							
W 1.c	Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.							
W 1.d	Establish and maintain a formal style.							
W 1.e	Provide a concluding statement or section that follows from and supports 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 clearly, previewing what is to follow; 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.							
Notes								

Text Types and Purposes

Standard		Notes	Dates Taught					Mastery
W 2.c	Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.							
W 2.d	Use precise language and domain-specific vocabulary to inform about or explain the topic.							
W 2.e	Establish and maintain a formal style.							
W 2.f.	Provide a concluding statement or section that follows from and supports 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 point of view 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.							

Notes

Text Types and Purposes

Standard		Notes	Dates Taught					Mastery
W 3.d	Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.							
W 3.e	Provide a conclusion that follows from and reflects on the narrated experiences or events.							
Notes								

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.)							
W 5.	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.							
W 6.	Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.							
Notes								

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 generating additional related, focused questions for further research and investigation.							
W 8.	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.							
W 9.	Draw evidence from literary or informational texts to support analysis, reflection, and research.							
W 9.a	Apply grade 7 Reading standards to literature (e.g., "Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history").							
W 9.b	Apply grade 7 Reading standards to literary nonfiction (e.g. "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").							

Notes

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.							
Notes								

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 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.							
SL 1.a	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.							
SL 1.b	Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.							
SL 1.c	Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.							
Notes								

SPEAKING & LISTENING

Comprehension and Collaboration

Standard		Notes	Dates Taught					Mastery
SL 1.d	Acknowledge new information expressed by others and, when warranted, modify their own views.							
SL 2.	Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.							
SL 3.	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.							
Notes								

Presentation of Knowledge and Ideas

Standard		Notes	Dates Taught					Mastery
SL 4.	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.							
SL 5.	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.							
SL 6.	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.							
Notes								

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	Explain the function of phrases and clauses in general and their function in specific sentences.							
L 1.b	Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.							
L 1.c	Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.							
L 2.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.							
Notes								

Conventions of Standard English

Standard		Notes	Dates Taught					Mastery
L 2.a	Use a comma to separate coordinate adjectives (e.g., It was a fascinating, enjoyable movie but not He wore an old[,] green shirt).							
L 2.b	Spell correctly.							
Notes								

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	Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.							
Notes								

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 7 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., belligerent, bellicose, rebel).							
Notes								

Vocabulary Acquisition and Use

Standard		Notes	Dates Taught					Mastery
L 4.c	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.							
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., literary, biblical, and mythological allusions) in context.							
L 5.b	Use the relationship between particular words (e.g., synonym/ antonym, analogy) to better understand each of the words.							
L 5.c	Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., refined, respectful, polite, diplomatic, condescending).							
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.							
Notes								

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 RELATIOSHIPS

Analyze proportional relationships and use them to solve real-world and mathematical problems.

Standard		Notes	Dates Taught					Mastery
RP 1.	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks $^1/^2$ mile in each $^1/^4$ hour, compute the unit rate as the complex fraction $^1/^2 \ / \ ^1/^4$ miles per hour, equivalently 2 miles per hour.							
RP 2.	Recognize and represent proportional relationships between quantities.							
RP 2.a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.							
RP 2.b	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.							
RP 2.c	Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.							

Notes

Analyze proportional relationships and use them to solve real-world and mathematical problems.

Standard		Notes	Dates Taught					Mastery
RP 2.d	Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.							
RP 3.	Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.							
Notes								

THE NUMBER SYSTEM

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Standard		Notes	Dates Taught					Mastery
NS 1.	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.							
NS 1.a	Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.							
Notes								

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Standard		Notes	Dates Taught					Mastery
NS 1.b	Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.							
NS 1.c	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.							
NS 1.d	Apply properties of operations as strategies to add and subtract rational numbers.							
NS 2.	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.							

Notes

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Standard		Notes	Dates Taught					Mastery
NS 2.a	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.							
NS 2.b	Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.							
NS 2.c	Apply properties of operations as strategies to multiply and divide rational numbers.							
NS 2.d	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.							
NS 3.	Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.							

Notes

EXPRESSIONS & EQUATIONS

Use properties of operations to generate equivalent expressions.

Standard	Notes	Dates Taught					Mastery
7.EE.1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.							
7.EE.2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."							
Notes							

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Standard	Notes	Dates Taught					Mastery
7.EE.3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.							
Notes							

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Standard		Notes	Dates Taught					Mastery
7.EE.4.	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.							
EE 4.a	Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?							
EE 4.b	Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.							

Notes

GEOMETRY

Draw construct, and describe geometrical figures and describe the relationships between them.

Standard		Notes	Dates Taught					Mastery
G 1.	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.							
G 2.	Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.							
G 3.	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.							

Notes

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

Standard		Notes	Dates Taught					Mastery
G 4.	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.							
G 5.	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.							
G 6.	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.							

Notes

STATISTICS & PROBABILITY

Use random sampling to draw inferences about a population.

Standard	Notes	Dates Taught					Mastery
SP 1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.							
SP 2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.							
Notes							

Draw informal comparative inferences about two populations.

Standard		Notes	Dates Taught					Mastery
SP 3.	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.							
Notes								

Draw informal comparative inferences about two populations.

Standard		Notes	Dates Taught					Mastery
SP 4.	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.							
Notes								

Investigate chance processes and develop, use, and evaluate probability models.

Standard		Notes	Dates Taught					Mastery
SP 5.	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.							
SP 6.	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.							
SP 7.	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.							
SP 7.a	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.							
Notes								

Investigate chance processes and develop, use, and evaluate probability models.

Standard		Notes	Dates Taught					Mastery
SP 7.b	Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?							
SP 8.	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.							
SP 8.a	Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.							
SP 8.b	Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.							
SP 8.c	Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?							
Notes								