

# CALIFORNIA ACADEMIC STANDARDS\*

## GRADE 6

### LANGUAGE ARTS

#### WRITING

<b>W.6.1</b>	Write arguments to support claims with clear reasons and relevant evidence.
<b>W.6.2</b>	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
<b>W.6.3</b>	Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
<b>W.6.4</b>	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
<b>W.6.9</b>	Draw evidence from informational texts to support analysis, reflection, and research.
<b>W.6.10</b>	Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

#### SPEAKING AND LISTENING

<b>SL.6.1</b>	Engage effectively in a range of collaborative discussions with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
<b>SL.6.4</b>	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.

#### LANGUAGE

<b>L.6.4</b>	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.
<b>L.6.6</b>	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.

#### WRITING IN SCIENCE AND TECHNICAL SUBJECTS

<b>WHST.6-8.1</b>	Write arguments focused on discipline-specific content.
<b>WHST.6-8.2</b>	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
<b>WHST.6-8.4</b>	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
<b>WHST.6-8.9</b>	Draw evidence from informational texts to support analysis, reflection, and research.
<b>WHST.6-8.10</b>	Write routinely over extended time frames (time for 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.

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# CALIFORNIA ACADEMIC STANDARDS\*

## GRADE 6

### LANGUAGE ARTS

#### READING IN SCIENCE AND TECHNICAL SUBJECTS

<b>RST.6-8.1</b>	Cite specific textual evidence to support analysis of science and technical texts.
<b>RST.6-8.2</b>	Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
<b>RST.6-8.3</b>	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
<b>RST.6-8.4</b>	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.
<b>RST.6-8.5</b>	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
<b>RST.6-8.6</b>	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
<b>RST.6-8.7</b>	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.
<b>RST.6-8.8</b>	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
<b>RST.6-8.9</b>	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
<b>RST.6-8.10</b>	By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.

#### READING: INFORMATIONAL TEXT

<b>RI.6.1</b>	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
<b>RI.6.2</b>	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.
<b>RI.6.3</b>	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text.
<b>RI.6.4</b>	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
<b>RI.6.5</b>	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.
<b>RI.6.6</b>	Determine an author’s point of view or purpose in a text and explain how it is conveyed.
<b>RI.6.7</b>	Integrate information presented in different media or formats as well as in words to develop a coherent understanding of a topic or issue.
<b>RI.6.8</b>	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.
<b>RI.6.10</b>	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.

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## GRADE 6

### MATHEMATICS

#### RATIOS AND PROPORTIONAL RELATIONSHIPS

<b>6.RP.1</b>	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
<b>6.RP.2</b>	Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ , and use rate language in the context of a ratio relationship.
<b>6.RP.3</b>	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.

#### THE NUMBER SYSTEM

<b>6.NS.2</b>	Fluently divide multi-digit numbers using the standard algorithm.
<b>6.NS.3</b>	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
<b>6.NS.5</b>	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero).

#### EXPRESSIONS AND EQUATIONS

<b>6.EE.1</b>	Write and evaluate numerical expressions involving whole-number exponents.
<b>6.EE.2</b>	Write, read, and evaluate expressions in which letters stand for numbers.
<b>6.EE.6</b>	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.

#### GEOMETRY

<b>6.G.2</b>	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 $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
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#### STATISTICS AND PROBABILITY

<b>6.SP.1</b>	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
<b>6.SP.2</b>	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.
<b>6.SP.4</b>	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
<b>6.SP.5</b>	Summarize numerical data sets in relation to their context, such as by:
<b>6.SP.5.a.</b>	Reporting the number of observations.
<b>6.SP.5.b.</b>	Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.

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## GRADE 6

### SCIENCE

#### EARTH'S SYSTEMS

<b>MS-ESS2-4</b>	Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
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#### ENERGY

<b>MS-PS3-3</b>	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
<b>MS-PS3-4</b>	Investigate and determine the relationships among the energy transferred, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
<b>MS-PS3-5</b>	Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

#### EARTH AND HUMAN ACTIVITY

<b>MS-ESS3-3</b>	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
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#### ENGINEERING DESIGN

<b>MS-ETS1-1</b>	Define the criteria and constraints of a design problem, accounting for scientific principles and impacts on people and the natural environment that may limit possible solutions.
<b>MS-ETS1-2</b>	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
<b>MS-ETS1-3</b>	Analyze data to determine similarities and differences to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

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