

Tustin Unified School District

Grade 8 Standards

LANGUAGE ARTS

Reading

- Reads books totaling one million words annually on their own, including a good representation of fiction and non-fiction texts.
- Uses context clues to determine meanings of unfamiliar words.
- Compares and contrasts the features and elements of consumer materials to gain meaning from documents (e.g., warranties, contracts, product information, and instruction manuals).
- Analyzes text and recognizes organizational patterns (e.g., order, cause and effect).
- Compares original text to a summary for accuracy of the main ideas, inclusion of critical details, and the extent to which it conveys the underlying meaning of the original text.
- Uses information from a variety of consumer, workplace, and public documents to explain a situation or decision and/or to solve a problem.
- Reads and responds to historically or culturally significant works of world literature, particularly American and British literature.
- Determines and articulates the relationship among the purposes and characteristics of different forms of poetry (e.g., ballad, lyric, couplet, epic, elegy, ode, and sonnet).
- Evaluates the structural elements of the plot (e.g., subplots, parallel episodes, climax), the plot's development, and how (and whether) conflicts are (or are not) addressed and resolved.
- Compares and contrasts motivations and reactions of literary characters from different historical eras confronting similar situations or conflicts.
- Analyzes relevance of setting (place, time, and customs) to the mood, tone, and meaning of text.
- Identifies and analyzes recurring comparative themes across works (e.g., good and evil, traditional and contemporary).
- Analyzes how a work of literature reflects the heritage, traditions, attitudes, and beliefs of its author (biographical approach).

Writing

- Writes clear, coherent, and focused essays that exhibit awareness of audience and purpose and contain formal introductions, bodies of supporting evidence, and conclusions.
- Uses the stages of the writing process, as needed.
- Creates compositions that establish a controlling impression, have a coherent thesis, and/or make a clear and well-supported conclusion.
- Establishes coherence within and among paragraphs through effective transitions, parallel structures, and similar writing techniques.
- Supports thesis or conclusions with analogies, paraphrases, quotations and opinions from authorities, comparisons, and similar devices.
- Revises writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs, passages, and ideas.
- Writes biographies, autobiographies, short stories and/or narratives, responses to literature, research reports, persuasive compositions, documents related to career development, and technical documents of at least 500 to 700 words.
- Uses correct and varied sentence types and sentence openings to reinforce the presentation of a lively and effective personal style.
- Edits written manuscripts to reflect proper grammar, punctuation and capitalization.
- Uses formal spelling.
- Organizes information and writes a research report around a defined and clear thesis using a wide range of resources.

Listening and Speaking

- Paraphrases a speaker's purpose and point of view and asks relevant questions concerning the speaker's content, delivery, and purpose.
- Prepares a speech outline based upon a chosen pattern of organization, generally including an introduction, transitions, previews, and summaries, a logically developed body and an effective conclusion.
- Uses precise language, action verbs, sensory details, appropriate and colorful modifiers, and active rather than passive voice in ways that enliven oral presentations.
- Uses appropriate grammar, word choice, enunciation, and pace during formal presentations.
- Evaluates the credibility of a speaker (e.g., hidden agendas, slanted or biased material).
- Delivers narrative, research, persuasive, and oral response to literature presentations.
- Recites poems (i.e., four to six stanzas), sections of speeches, or dramatic soliloquies, using voice modulation, tone and gestures expressively to enhance meaning.

MATH

The standards for grades 8 and above are organized differently than those for kindergarten through grade 7. Rather than being listed by mathematics strand, the standards fall into discipline headings such as Algebra, Geometry, etc. In grade 8, students may be enrolled in either an Algebra 1 course or Geometry course. Key standards for each course are listed below:

Algebra 1

- Recognizes and uses distributive and zero product properties.
- Uses order of operations to simplify expressions involving integers.
- Determines square root of a perfect or non-perfect square.
- Simplifies expressions with exponents.
- Understands the meaning of $>$, \geq , \cong , $<$, \leq .
- Adds, subtracts, multiplies and divides monomials and polynomials.
- Evaluates expressions with exponents and rational numbers.
- Solves multiple-step equations and inequalities.
- Solves rational and irrational equations.
- Solves absolute value equations.
- Solves compound and absolute value inequalities.
- Identifies inequalities on a graph.
- Graphs linear function of one or two variables.
- Determines slope and x - and y -intercepts of a line.
- Graphs a linear equation with two variables.
- Understands the relationship between intersecting, parallel, and perpendicular lines.
- Determines a linear equation represented by a straight line.
- Derives linear equations using point-slope formula.
- Solves systems of linear equations.
- Graphs an inequality.
- Finds solution set for an inequality.
- Simplifies algebraic expressions.
- Identifies the function rule given a set of related pairs.
- Finds domain and range of a function.
- Simplifies radical expressions.
- Understands and applies the quadratic formula.
- Uses inductive and deductive reasoning.
- Understands basic logic vocabulary and concepts.
- Writes proofs involving linear expressions or equations.

Geometry

- Explains and uses inductive and deductive reasoning.
- Demonstrates basic geometric construction.
- Constructs if-then statements from hypothesis and conclusion.
- Tests validity through counterexample.
- Proves relationships between points, lines, planes, and space.
- Writes formal and informal geometric proofs.
- Understands basic theorems for congruence relationships for triangles, quadrilaterals and polygons.
- Understands basic triangle theorems.
- Identifies triangles by angles and sides.
- Identifies and classifies quadrilaterals and polygons.
- Finds complement and supplement of angles.
- Proves properties of parallel lines intersected by a line.
- Demonstrates knowledge of parts of a circle.
- Uses formulas for measurement for circumference, perimeter and area of circles, sectors of circles, polygons.
- Calculates the surface area and volume of three-dimensional objects.
- Understands and uses the Pythagorean theorem.
- Determines the equations of lines and circles.
- Expresses trigonometric functions as ratios.
- Uses sine, cosine, and tangent ratios to find missing angles and side lengths of triangles.

HISTORY/SOCIAL SCIENCE

United States History and Geography

- Understands the major events preceding the founding of the nation and relate their significance to the development of American constitutional democracy.
- Analyzes the political principles underlying the U.S. Constitution and compare the enumerated and implied powers of the federal government.
- Understands the foundation of the American political system and the ways in which citizens participate in it.
- Analyzes the aspirations and ideals of the people of the new nation.
- Analyzes U.S. foreign policy in the early Republic.
- Analyzes the divergent paths of the American people from 1800 to the mid-1800's and the challenges they faced, with emphasis on the Northeast, South and West.
- Analyzes the early and steady attempts to abolish slavery and realize the ideals of the Declaration of Independence.
- Analyzes the multiple causes, key events and complex consequences of the Civil War.
- Analyzes the character and lasting consequences of Reconstruction.
- Analyzes the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution.

SCIENCE

Investigation and Experimentation

- Plans and conducts a scientific investigation to test a hypothesis.
- Evaluates the accuracy and reproducibility of data.
- Distinguishes between variable and controlled parameters in a test.
- Recognizes the slope of the linear graph as the constant in the relationship $y=kx$ and apply this to interpret graphs constructed from data.
- Constructs appropriate graphs from data and develop quantitative statements about the relationships between variables.
- Applies simple mathematical relationships to determine one quantity given the other two (including speed = distance/time, density = mass/volume, force = pressure x area, volume = area x height).
- Distinguishes between linear and non-linear relationships on a graph of data.

Motion

- Demonstrates understanding that the velocity of an object is the rate of change of its position.

Forces

- Demonstrates understanding that unbalanced forces cause change in velocity.

Structure of Matter

- Demonstrates understanding that elements have distinct properties and atomic structure. All matter is comprised of one or more of over 100 elements.

Earth in the Solar System (Earth Science)

- Demonstrates understanding that the structure and composition of the universe can be learned from the study of stars and galaxies, and their evolution.

Reactions

- Demonstrates understanding that chemical reactions are processed in which atoms are rearranged into different combinations of molecules.

Chemistry of Living Systems (Life Science)

- Demonstrates understanding that principles of chemistry underlie the functioning of biological systems.

Periodic Table

- Demonstrates understanding that the organization of the Periodic Table is based on the properties of the elements and reflects the structure of atoms.

Density and Buoyancy

- Demonstrates understanding that all objects experience a buoyant force when immersed in a fluid.

TECHNOLOGY

- Explores how technology relates to college and careers.
- Practices ethical behavior.
- Demonstrates basic computer literacy skills.
- Writes and publishes original documents.
- Learns Software Applications in order to support curricular activities in all content areas.
- Understands and uses telecommunications.
- Conducts research using electronic reference tools.