

A Parent's Guide to Curriculum Standards

Grade 4
2011



2310 Aldergrove Avenue, Escondido, CA 92029

Grade Level Curriculum Standards

The Escondido Union School District is committed to providing all students the best education to enable them to reach their highest potential. To achieve this goal, the district has identified academic standards for each grade level, kindergarten through eighth grade. The grade level standards serve as the basis for instruction throughout the district.

Focus Goals, 2011-2013

- I. Ensure multiple high quality teaching and learning opportunities for every student.
- II. Provide systemic student supports to promote high student expectations and achievement for all students.
- III. Through formal discussions with district stakeholders, explore how EUSD can increase employee support and accountability for student achievement.
- IV. Infuse innovation into teaching and learning. Emphasis will be on 21st century learning environments to include technology and project-based learning, resulting in greater student engagement.
- V. Ensure all students have equal access to a personalized, balanced, and challenging curriculum to meet individual students' academic, creative, social and physical needs.
- VI. Strengthen the district's fiscal resiliency to withstand current economic limitations.

Parents Are Partners In Education

The Escondido Union School District recognizes that the foundation of a good education begins in the home. Research shows that when parents are involved in their children's education, students do better. There are many ways parents can become actively involved in the school. By being aware of what is being taught at each grade level, you will be able to support your child's education and help answer the question, "What should my child be learning in school?" Each section in this document contains suggestions on how parents can help.

Language Arts - Reading

Word Analysis, Fluency, and Systematic Vocabulary Development: Students understand the basic features of a reading. They select and know how to translate letter patterns into spoken language using phonics, syllabication, and word parts. They apply this knowledge to achieve fluent oral and silent reading.

Word Recognition:

- Read narrative and expository text aloud with grade-appropriate fluency and accuracy and with appropriate pacing, intonation, and expression

Vocabulary and Concept Development:

- Apply knowledge of word origins, derivations, synonyms, antonyms, and idioms to determine the meaning of words and phrases
- Use knowledge of root words to determine the meaning of unknown words within a passage
- Know common Greek- and Latin-derived roots and affixes, and use this knowledge to analyze the meaning of complex words
- Use a thesaurus to determine related words and concepts
- Distinguish and interpret multiple meaning words

Reading Comprehension: Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed, including generating and responding to essential questions, making predictions, and comparing information from several sources. In addition to their regular school reading, by grade 4, students read one-half million words annually, including a good representation of narrative and expository text appropriate for each grade.

Structural Features of Informational Materials:

- Identify structural patterns found in informational text to strengthen comprehension

Comprehension and Analysis of Grade-Level-Appropriate Text:

- Use appropriate strategies when reading for different purposes
- Make and confirm predictions about text by using prior knowledge and ideas presented in text itself, including illustrations, titles, topic sentences, key words, and foreshadowing clues
- Evaluate new information and hypotheses by testing them against known information and ideas
- Compare and contrast information on the same topic after reading several passages or articles
- Distinguish between cause and effect and fact and opinion expository text
- Follow multiple-step instructions from a basic technical manual

Literary Response and Analysis: Students read and respond to a wide variety of significant works of children's literature. They distinguish between the structural features of text and the literary terms or elements.

Structural Features of Literature:

- Describe the structural differences of various imaginative forms of literature, including fantasies, fables, myths, legends, and fairy tales

Narrative Analysis of Grade-Level-Appropriate Text:

- Identify the main events of the plot, their causes, and how each influences future action(s)
- Use knowledge of the situation and setting and of a character's traits and motivations to determine the causes for that character's actions
- Compare and contrast tales from different cultures by tracing the exploits of one character type and develop theories to account for similar tales in diverse cultures
- Identify and define the presence of figurative language in literary works, including simile, metaphor, hyperbole, and personification

Writing

Writing Strategies: Students write clear and coherent sentences and paragraphs that develop a central idea. Their writing considers audience and purpose. They successfully use stages of the writing process.

Organization and Focus:

- Select focus, organization, and point of view based upon purpose, audience, length, and format requirements
- Create a multiple paragraph composition that: (1) provides an introductory paragraph; (2) establishes and supports a central idea with a topic sentence at or near the beginning of the first paragraph; (3) includes support paragraphs with simple facts, details, and explanations; (4) concludes with a paragraph that summarizes the points; (5) is indented properly
- Use traditional structures for conveying information

Penmanship:

- Write fluidly and legibly in cursive or joined italic, easily transcribing manuscript into cursive and vice-versa

Research and Technology:

- Quote or paraphrase information sources, citing them appropriately
- Locate information in reference texts by using organizational features (e.g., prefaces, appendices)
- Use various reference materials as an aid to writing (e.g., dictionary, thesaurus, card catalog, encyclopedia, on-line information)
- Understand the structure and organization of (and use) almanacs, newspapers, and periodicals

- Demonstrate basic keyboarding skills and familiarity with the vocabulary of technology (e.g., cursor, software, memory, disk drive, hard drive)

Revising and Evaluating Strategies:

- Edit and revise selected drafts to improve coherence and progression by adding, deleting, consolidating, and rearranging text

Writing Applications (genres and their characteristics): Students write compositions that describe and explain familiar objects, events, and experiences. Student writing demonstrates a command of standard English and drafting, research, and organizational strategies.

- Write narratives on incidents that: (1) relate ideas, observations, and/or memories; (2) provide a context to enable the reader to imagine the world of the event or experience; (3) use concrete sensory details; (4) provide insight into why this incident is memorable
- Write responses to literature that: (1) demonstrate an understanding of the literary work; (2) support judgments through references both to the text and to prior knowledge
- Write information reports that: (1) frame a key question about an issue or situation; (2) include facts and details for focus; (3) draw from more than one source of information (e.g., speakers, books, newspapers, media sources)
- Write summaries that contain the main ideas of the reading selection and the most significant details

Written and Oral English Language Conventions

English Language Conventions are integral both to Writing and to Listening and Speaking. Thus, these standards have been placed between the other two.

Written and Oral English Language Conventions: Students write and speak with a command of standard English conventions that are appropriate to each grade level.

Sentence Structure:

- Use simple, compound sentences in writing and speaking
- Combine short, related sentences with appositives, participle phrases, adjectives, adverbs, and prepositional phrases

Grammar:

- Identify and use regular and irregular verbs, adverbs, prepositions, and coordinating conjunctions in writing and speaking

Punctuation:

- Use commas in direct quotations, apostrophes in possessives and contractions, and parentheses
- Use underlining, quotations, or italics to identify titles

Capitalization:

- Capitalize names in magazines, newspapers, works of art, musical compositions, names of organizations, and the first word in quotations

Spelling:

- Spell correctly roots, inflections, suffixes and prefixes, and syllable constructions

Listening and Speaking

Listening and Speaking Strategies: Students listen and respond critically to oral communication. They speak in a manner that guides and informs the listener's understanding of key ideas, using appropriate phrasing, pitch, and modulation.

Comprehension:

- Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings
- Summarize major ideas and supporting evidence presented in spoken messages and formal presentations
- Identify how language reflects regions and cultures
- Give precise directions and instructions

Organization and Delivery of Oral Communication:

- Present effective introductions and conclusions that guide and inform the listener's understanding of key ideas and evidence
- Use traditional structures for conveying information
- Emphasize points in ways that assist the listener/viewer in following key ideas and concepts
- Use details, examples, anecdotes, or experiences to explain or clarify information
- Use volume, pitch, phrasing, pace, modulation, tone, and gestures appropriately to enhance meaning

Analysis and Evaluation of Oral and Media Communications:

- Evaluate the role of the media in focusing attention on events and in forming opinions on issues

Speaking Applications: Students deliver brief recitations and oral presentations about familiar experiences or interests that are organized around a coherent thesis statement. Student speaking demonstrates a command of standard English, and organization and delivery strategies.

- Make narrative presentations on an incident that: (1) relate ideas, observations, and/or memories; (2) provide context that enables the listener to imagine the circumstances in which the event or experience occurred; (3) provide insight into why the selected incident is memorable
- Make informational presentations that: (1) frame a key question; (2) contain facts and details that help listeners focus; (3) incorporate more than one source of information
- Deliver oral summaries of articles and books that contain the main ideas of the event/article and the most significant details
- Recite brief poems, brief soliloquies, or dramatic dialogues, using clear diction, tempo, volume, and phrasing

POINTERS FOR PARENTS

LANGUAGE ARTS

- ⇒ *Teach your child to analyze stories and poems recognizing the setting, plot, and characters.*
- ⇒ *Have your child read a variety of books (e.g., folktales, legends, myths). Read nonfiction prose (e.g. animal books, magazines).*
- ⇒ *Research a topic of interest using encyclopedias, magazines, etc. Have your child report their findings in written form. Use different sources (e.g., atlases, encyclopedias, glossaries, the Internet, magazine articles).*



- ⇒ *Practice dictating words in sentences for your child to write.*
- ⇒ *Have your child practice reciting famous passages from speeches and participate in dramatic activities.*

Math

By the end of fourth grade, students understand large numbers and addition, subtraction, multiplication, and division of whole numbers. They describe and compare simple fractions and decimals. They understand the properties of and the relationships between plane geometric figures. They collect, represent, and analyze data to answer questions.

Number Sense

Students understand place value of whole numbers and decimals to two decimal places and how these relate to simple fractions, and use concepts of negative numbers.

- Read and write positive and negative whole numbers in the millions
- Order and compare whole numbers from negative 1,000,000 to 1,000,000 and decimals to two decimal places
- Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand
- Decide when a rounded solution is called for, and explain why this is the case
- Interpret different meanings for fractions including parts of a whole, parts of a set, indicated division of whole numbers and quantities (and measures) between whole numbers on a number line; and relate to simple decimals on a number line
- Write tenths and hundredths in decimal and fraction notation, and know fraction/decimal equivalents for halves and fourths (e.g., $1/2 = 0.5$ or $.50$; $7/4 = 1\ 3/4 = 1.75$)
- Write the fraction represented by a drawing of parts of a figure; represent a given fraction using drawings
- Use concepts of negative numbers (e.g., on a number line, in counting, in temperature, "owing")
- Identify the relative position of fractions, mixed numbers, and decimals to two decimal places on the number line
- Write numbers in expanded form to 999,999,999 and decimals through thousandths
- Identify Roman numerals through M (1,000)
- Identify and write equivalent fractions and put fractions in lowest terms
- Write mixed numbers and change improper fractions to mixed numbers
- Add and subtract with fractions having like and unlike denominators of 12 or less
- Demonstrate understanding that the value of a fraction is not changed when the numerator and denominator are multiplied by the same number (i.e., multiplied by one) and use this fact to simplify and compute fractions

Students extend their use and understanding of whole numbers to addition and subtraction of simple decimals.

- Estimate and compute the sum or difference of multi-digit whole numbers and positive decimals to two places
- Round two place decimals to one decimal or the nearest whole number, and use rounding to judge the reasonableness of an answer

Students solve problems involving addition, subtraction, multiplication, and division of whole numbers, including the addition and subtraction of negative numbers and understand the relationships among the operations.

- Demonstrate understanding of, and the ability to use standard algorithms for addition and subtraction of multi-digit numbers
- Demonstrate understanding of, and ability to use standard algorithms for multiplying a multi-digit number by a two-digit number and long division for dividing a multi-digit number by a two-digit number; use relationships between them to simplify computations and to check results
- Solve problems involving multiplication of multi-digit numbers by two-digit numbers
- Solve problems involving division of multi-digit numbers by two-digit numbers
- Identify perfect squares (and their square roots) to 144
- Multiply mentally by 10, 100, 1,000 and 10,000
- Use mental computation strategies for multiplication, such as breaking a problem into partial products (e.g., $3 \times 27 = (3 \times 20) + (3 \times 7) = 60 + 21 = 81$)
- Solve problems of up to three steps
- Identify multiples of a given number and common multiples of two given numbers

Students know how to factor small whole numbers.

- Understand that many whole numbers decompose in different ways (e.g., $12 = 4 \times 3 = 2 \times 6 = 2 \times 2 \times 3$)
- Know that numbers such as 2, 3, 5, 7, 11 do not have any factors except 1 and themselves, and that such numbers are called prime numbers
- Identify common factors of two given numbers

Algebra and Functions

Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences.

- Use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate understanding and use of a concept of a variable)
- Interpret and evaluate mathematical expressions that use parentheses
- Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations
- Use and interpret formulas (e.g., Area = length times width or $A = lw$) to answer questions about quantities and their relationships
- Understand that an equation such as $y = 3x + 5$ is a prescription for determining a second number when a first number is given

Students know how to manipulate equations.

- Know and understand that equals added to equals are equal
- Know and understand that equals multiplied by equals are equal

Statistics, Data Analysis, and Probability

Students organize, represent, and interpret numerical and categorical data, and clearly communicate their findings.

- Formulate survey questions, systematically collect, and represent data on a number line, and coordinate graphs, tables, and charts
- Identify the mode(s) for sets of categorical data, and the mode(s), range, mean, median, and any apparent outliers for numerical data sets
- Interpret one- and two-variable data graphs to answer questions about a situation

Students make predictions for simple probability situations.

- Represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams)
- Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4; $3/4$)

Measurement and Geometry

Students understand perimeter and area

- Measure and compute the area of rectangular shapes, using appropriate units square centimeter, square meter, square kilometer, square inches, square yard, square mile
- Recognize that the rectangles having the same area can have different perimeters
- Understand that the same number can be the perimeter of different rectangles, each having a different area
- Understand and use formulas to solve problems involving perimeters and areas of rectangles and squares. Use these formulas to find the areas of more complex figures by dividing them into parts with these basic shapes
- Estimate and measure length in parts of an inch ($\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$), inches, feet, yards, millimeters, centimeters, and meters
- Know equivalencies among US customary units of measurement, and solve problems involving changing units of measurement
- Know equivalencies among metric units of measurement, and solve problems involving changing units of measurement
- Find the approximate area of regular and irregular figures using grids

Students use two-dimensional coordinate grids to represent points and graph lines and simple figures.

- Draw the points corresponding to linear relationships on graph paper (e.g., draw the first ten points for the equation $y = 3x$ and connect them using a straight line)
- Understand that the length of a horizontal line segment equals the difference of the x-coordinates
- Understand that the length of a vertical line segment equals the difference of the y-coordinates

Students demonstrate understanding of plane and solid geometric objects. They use this knowledge to show relationships and solve problems.

- Identify lines that are parallel and perpendicular
- Identify the radius and diameter of a circle
- Identify congruent figures
- Identify figures that have bilateral and rotational symmetry
- Know the definitions of right angle, acute angle, and obtuse angle. Understand that 90, 180, 270, and 360 degrees are respectively, associated with $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and full turns.
- Visualize, describe, and represent geometric solids (e.g., prisms, pyramids, etc.) in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of three-dimensional objects; and draw patterns (of faces) for a solid that when folded will make a model of the solid
- Know the definitions of different triangles (e.g., equilateral, isosceles, scalene), and identify their features
- Know the definition of different quadrilaterals (e.g., rhombus, square, rectangle, parallelogram, trapezoid)
- Identify, name, and draw points, segments, rays, and lines (AB)
- Identify polygons – triangles, quadrilateral, pentagon, hexagon, octagon (regular), parallelogram, trapezoid, rectangle, rhombus, square – and identify and draw diagonals of quadrilaterals
- Explore rotations and translations of geometric figures
- Identify whether the sides of a plane figure or the edges or faces of a solid object are the same size, parallel, or perpendicular

Mathematical Reasoning

Students make decisions about how to approach problems.

- Analyze problems by identifying relationships, discriminating relevant from irrelevant information, sequencing and prioritizing information, and observing patterns
- Determine when and how to break a problem into simpler parts

Students use strategies, skills, and concepts in finding solutions.

- Use estimation to verify the reasonableness of calculated results
- Apply strategies and results from simpler problems to more complex problems
- Use a variety of methods such as words, numbers, symbols, charts, graphs, tables, diagrams, and models to explain mathematical reasoning
- Express the solution clearly and logically using appropriate mathematical notation, terms, and clear language, and support solutions with evidence, in both verbal and symbolic work
- Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specific degree of accuracy
- Make precise calculations, and check the validity of the results from the context of the problem

Students move beyond a particular problem by generalizing to other situations.

- Evaluate the reasonableness of the solution in the context of the original situation
- Note method of deriving the solution and demonstrate conceptual understanding of the derivation by solving similar problems
- Develop generalizations of the results obtained and extend them to other circumstances

POINTERS FOR PARENTS

MATH

- ⇒ *Use varied opportunities to reinforce multiplication and division. Have your child practice figuring out problems in their head.*
- ⇒ *Have your child identify place values in large numbers and be able to round the number to the nearest thousand. Make it into a game.*
- ⇒ *Reinforce finding decimal points and fractions on a number line.*
- ⇒ *Practice using division. Review with your child it is the inverse operation of multiplication, like subtraction is the inverse operation of addition.*
- ⇒ *Involve your child in your math computations, reinforcing the importance of mathematics in our daily lives. If ordering items in a catalog, have your child fill out the form and compute the total amount. Learn to evaluate expressions and be familiar with the order of operations to use.*



History/Social Science

CALIFORNIA: A CHANGING STATE

Students learn the story of their home state, unique in American history in terms of its vast and varied geography, its many waves of immigration beginning with pre-Columbian societies, and its continuous diversity, economic energy, and rapid growth. In addition to the specific treatment of milestones in California history, students examine the state in the context of the rest of the nation, with an emphasis on the U.S. Constitution and the relationship between state and federal government.

Students demonstrate an understanding of the physical and human geographic features that define places and regions in California by:

- Explaining and using the coordinate grid system of latitude and longitude to determine absolute locations of places in California and on Earth
- Distinguishing between the two poles; the equator and the prime meridian; the tropics; and the hemispheres using coordinates to plot locations
- Identifying the state capital and describing the basic regions of California, including how their characteristics and physical environment affect human activity (e.g., water, landforms, vegetation, climate)
- Identifying the location of and explaining the reasons for the growth of towns in relation to the Pacific Ocean, rivers, valleys, and mountain passes
- Using maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation

Students describe the social, political, cultural, and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods, in terms of:

- The major nations of California Indians, their geographic distribution, economic activities, legends, and religious beliefs; and how they depended upon, adapted to, and modified the physical environment by cultivation of land and sea resources
- The early land and sea routes to, and European settlements in, California with a focus on the exploration of the North Pacific, noting the physical barriers of mountains, deserts, ocean currents, and wind patterns (e.g., Captain Cook, Valdez, Vitus Bering, Juan Cabrillo)
- The Spanish exploration and colonization of California, including the relationships among soldiers, missionaries and Indians (e.g., biographies of Juan Crespi, Junipero Serra, Gaspar de Portola)
- The mapping, geographic basis of, and economic factors in the placement and function of the Spanish missions; how the mission system expanded the influence of Spain and Catholicism throughout New Spain and Latin America
- The daily lives of the people, native and non-native, who occupied the presidios, missions, ranchos, and pueblos
- The role of the Franciscans in the change of California from a hunter-gatherer economy to an agricultural economy
- The effects of the Mexican War for Independence on Alta California, including the territorial boundaries of North America
- The period Mexican rule and its attributes, including land grants, secularization of the missions and the rise of the rancho economy

Students explain the economic, social, and political life of California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush, and California statehood, in terms of:

- The location of Mexican settlements in California and other settlements including Ft. Ross and Sutter's Fort
- Comparisons of how and why people traveled to California and the routes they traveled (e.g., biographies and legends of James Beckwourth, Jedediah Smith, John C. Fremont, Juan Cabrillo)

- The effect of the Gold Rush on settlements, daily life, politics, and the physical environment (e.g., biographies of John Sutter, Mariano Guadalupe Vallejo, Phoebe Apperson Hearst)
- The immigration and migration to California between 1850 and 1900; its diverse composition, the countries of origin and their relative locations, and the conflicts and accords among diverse groups (e.g., the 1882 Exclusion Act)
- The lives of women who helped build early California (e.g., biographies of Bernarda Ruiz, Biddy Mason)
- How California became a state and how its new government differed from those during the Spanish and Mexican periods

Students explain how California became an agricultural and industrial power by tracing the transformation of the California economy and its political and cultural development since the 1850's, in terms of:

- The story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the Transcontinental Railroad, including the contributions of the Chinese workers to its construction
- How the Gold Rush transformed the economy of California, including the type of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people
- Rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles)
- The effects of the Great Depression, the Dust Bowl, and World War II on California
- The development and location of new industries since the turn of the century, such as aerospace, electronics, large scale commercial agriculture and irrigation projects, the oil and automobile industries, communications and defense, and important trade links with the Pacific Basin
- California's water system and how it evolved over time into a network of dams, aqueducts, and reservoirs
- The history and development of California's public education system, including universities and community colleges
- The impact of 20th century Californians on the nation's artistic and cultural development, including the rise of the entertainment industry (e.g., biographies of Louis B. Meyer, Walt Disney, John Steinbeck, Ansel Adams, Dorothea Lange, John Wayne)

Students understand the structure, functions, and powers of the United States local, state, and federal governments as described in the U.S. Constitution, in terms of:

- What the U.S. Constitution is and why it is important (i.e., a written document that defines the structure and purpose of the U.S. government; describes the shared powers of federal, state, and local governments)
- The purpose of the state constitution, its key principles, and its relationship to the U.S. Constitution (with an emphasis on California's Constitution)
- The similarities (e.g., written documents, rule of law, consent of the governed, three separate branches) and differences (e.g., scope of jurisdiction, limits on government powers, use of military) among federal, state, and local governments
- The structure and function of state governments, including the roles and responsibilities of their elected officials
- The components of California's governance structure (i.e., cities and towns, Indian rancherias and reservations, counties, school districts)



Science

Physical Sciences

Electricity and magnetism are related effects that have many useful applications in everyday life. As a basis for understanding this concept, students know:

- How to design and build simple series and parallel circuits using components such as wires, batteries, and bulbs
- How to build a simple compass and use it to detect magnetic effects, including Earth's magnetic field
- Electric currents produce magnetic fields and how to build a simple electromagnet
- The role of electromagnets in the construction of electric motors, electric generators, and simple devices such as doorbells and earphones
- Electrically charged objects attract or repel each other
- Magnets have two poles, labeled north and south, and like poles repel each other while unlike poles attract each other
- Electrical energy can be converted to heat, light, and motion

Life Sciences

All organisms need energy and matter to live and grow. As a basis for understanding this concept, students know:

- Plants are the primary source of matter and energy entering most food chains
- Producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs, and may compete with each other for resources in an ecosystem
- Decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals

Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept, students know:

- Ecosystems can be characterized in terms of their living and nonliving components.
- For any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all
- Many plants depend on animals for pollination and seed dispersal, while animals depend on plants for food and shelter
- Most microorganisms do not cause disease and many are beneficial

Earth Sciences

The properties of rocks and minerals reflect the processes that formed them. As a basis for understanding this concept, students know:

- how to differentiate among igneous, sedimentary, and metamorphic rocks by their properties and methods of formation (the rock cycle)
- How to identify common rock-forming minerals (including quartz, calcite, feldspar, mica, and hornblende) and ore minerals using a table of diagnostic properties

Waves, wind, water, and ice shape and reshape the Earth's land surface. As a basis for understanding this concept, students know:

- Some changes in the Earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes
- Natural processes, including freezing/thawing and growth of roots, cause rocks to break down into smaller pieces
- Moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition)

Investigation and Experimentation

Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, and to address the content the other three strands, students should develop their own questions and perform investigations. Students will:

- Differentiate observation from inference (interpretation) and know that scientists' explanations come partly from what they observe and partly from how they interpret their observations
- Measure and estimate weight, length, or volume of objects
- Formulate predictions and justify predictions based on cause and effect relationships
- Conduct multiple trials to test a prediction and draw conclusions about the relationships between results and predictions
- Construct and interpret graphs from measurements
- Follow a set of written instructions for a scientific investigation.

POINTERS FOR PARENTS

HISTORY/SOCIAL SCIENCE

- ⇒ *Practice reading maps with your child and use longitude and latitude, International dateline, mountains, time zones, etc.*
- ⇒ *Take a family vacation to some of the California Missions. Have your child keep a journal of what they learned and keep a log of photos taken to put together in a memory album.*
- ⇒ *Play "Risk", a geographical board game with your child.*
- ⇒ *Play "Seek and Find" games with your child by providing two points on a map and/or globe.*
- ⇒ *Visit your local city hall and the county courthouse and explain the functions of government to your child.*

SCIENCE

- ⇒ *Observe your child's observations becoming more systematic and his predictions, hypotheses, and analyses becoming more detailed (e.g., make predictions from charts and data collected).*
- ⇒ *Your child should have a deeper understanding of how scientists think. Scientist's beliefs and findings are based on evidence. Discuss with your child the types of investigation scientist carry out to answer their questions (e.g., observations, data, controlled experiments).*
- ⇒ *Have your child practice taking his pulse when he is sitting and again after he jump ropes or runs in place for a minute. Make a bar color-coded graph to chart the results. Discuss the results and figure out why exercise causes a change in heart rate.*
- ⇒ *Begin to have your child develop an understanding of basic chemistry (e.g., the structure of atoms, electrons, neutrons, and protons; how solutions form: matter, density, vacuum, volume: elements, carbon monoxide, gold, oxygen).*
- ⇒ *Remind your child that scientists question other scientists work and findings to test for accuracy.*

Mission Statement

The Escondido Union School District, in partnership with our community, commits to providing quality learning experiences for all students in a supportive environment, enabling them to be lifelong learners, productive members of the community, and positive contributors.



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