

A Parent's Guide to Curriculum Standards

Grade 7 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 use their knowledge of word origins and word relationships, as well as historical and literary context clues, both to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level-appropriate words.

Vocabulary and Concept Development:

- Identify idioms, analogies, metaphors, and similes in prose and poetry
- Use knowledge of Greek, Latin, and Anglo-Saxon roots and affixes to understand content area vocabulary
- Clarify word meaning through the use of definition, example, restatement, or contrast

Reading Comprehension: Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of text, and they relate text structure, organization, and purpose. In addition, by grade 8, students read one million words annually on their own, including a good representation of narrative and expository text appropriate for each grade.

Structural Features of Informational Materials:

- Understand and analyze the differences among various categories of informational materials (e.g., textbooks, newspapers, instructional manuals, signs) in terms of their structure and purpose
- Locate information using a variety of consumer, workplace, and public documents
- Analyze text which uses cause and effect patterns

Comprehension and Analysis of Grade-Level-Appropriate Text:

- Identify and trace the development of an author's argument, point of view, or perspective in text

- Understand and explain the use of a simple mechanical device by following technical directions

Expository Critique:

- Assess the adequacy, accuracy, and appropriateness of the author's evidence to support claims and assertions, noting instances of bias, and stereotyping

Literary Response and Analysis: Students read and respond to historically or culturally significant works of world literature, particularly American and British literature. They clarify the ideas and connect them to other literary works. The quality and complexity of the materials to be read by students are illustrated in the *California Reading List*.

Structural Features of Literature:

- Articulate the expressed purposes and characteristics of different forms of prose (short story, novel, novella, essay)

Narrative Analysis of Grade-Level-Appropriate Text:

- Identify events that advance the plot, and determine how each event explains past or present action(s) or foreshadows future action(s)
- Analyze characterization as delineated through a character's thoughts, words, speech patterns, and actions; the narrator's description; and what other characters think, say, and do
- Identify and analyze recurring themes across works, (e.g., bravery, loneliness, loyalty, friendship)
- Contrast points of view in narrative text and how they affect the overall theme of the work (e.g., first versus third person, limited versus omniscient, subjective versus objective)

Literary Criticism:

- Analyze a range of responses to a literary work, and determine the extent to which the literary elements in the work shaped those responses (Reader Response)

Writing

Writing Strategies: Students write clear, coherent, and focused essays. Writing exhibits awareness of audience and purpose. Essays contain formal introductions, bodies of supporting evidence, and conclusions. Students successfully use the stages of the writing process, as needed.

Organization and Focus:

- Create an organizational structure that balances all aspects of the composition and uses effective transitions between sentences and ideas to unify key ideas
- Support all statements and claims with anecdotes, descriptions, facts and statistics, and/or specific examples
- Use strategies of note-taking, outlining, and summarizing to structure composition drafts

Research and Technology:

- Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research
- Give credit for both quoted and paraphrased information in a bibliography using a consistent and sanctioned format and methodology for citations
- Create documents using word-processing skills and publishing programs, and develop simple databases and spreadsheets to manage information and prepare reports

Revising and Evaluating Writing:

- Revise writing to improve organization and word choice after checking the logic of the ideas and the precision of the vocabulary

Writing Applications: Students write narrative, expository, persuasive, and descriptive text of at least 500 to 700 words. Student writing demonstrates a command of standard English and the research, organizational, and drafting strategies.

- Write fictional or autobiographical narratives that: (1) develop a standard plot line (beginning, conflict, rising action, climax, denouement) and point of view; (2) develop complex major and minor characters and a definite setting; (3) use a range of appropriate strategies (e.g., dialogue, suspense, naming of specific narrative action, including movement, gestures, and expressions)
- Write responses to literature that: (1) develop interpretations which exhibit careful reading, understanding, and insight; (2) organize interpretations around several clear ideas, premises, or images; (3) justify interpretations through sustained use of examples and textual evidence
- Write research reports that: (1) pose relevant and tightly drawn questions about the topic; (2) convey clear and accurate perspectives on the subject; (3) include evidence generated through the formal research process (e.g., magazines, newspapers, dictionaries); (4) document reference sources with footnotes and a bibliography
- Write persuasive compositions that: (1) state a clear position or perspective in support of a proposition or proposal; (2) describe the points in support of the proposition, employing well-articulated evidence; (3) anticipate and address reader concerns and counter-arguments
- Write summaries of reading materials that: (1) contain the materials' main ideas and most significant details; (2) are written in the student's own words, except for material quoted from the source; (3) reflect the underlying meaning of the source, not just the superficial 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:

- Place modifiers properly, and use active voice

Grammar:

- Identify and use infinitives, participles, and clear pronoun/antecedent references
- Identify: (1) all parts of speech; (2) types and structure of sentences; (3) mechanics (e.g., quotations, commas at end of dependent clauses); (4) appropriate usage (e.g., pronoun reference)

Punctuation:

- Identify and use hyphen, dash, brackets, and semi-colon between two clauses of a compound sentence that are not joined by a conjunction

Capitalization:

- Use correct capitalization

Spelling:

- Spell derivatives correctly by applying the spellings of bases and affixes

Listening and Speaking

Listening and Speaking Strategies: Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication.

Comprehension:

- Ask probing questions designed to elicit information, including evidence to support the listener's claims and conclusions
- Determine the speaker's attitude toward the subject
- Respond to persuasive messages with questions, challenges, or affirmations

Organization and Delivery of Oral Communication:

- Organize information to achieve particular purposes and to appeal to the background and interests of the audience
- Arrange details, reasons, descriptions, and examples effectively and persuasively in relation to the audience
- Use explicit techniques for effective presentations, including voice modulation, inflection, tempo, enunciation, and eye contact

Analysis and Evaluation of Oral and Media Communications:

- Provide constructive feedback to speakers concerning the coherence and logic of a speech's content and delivery, as well as its overall impact upon the listener(s)
- Analyze the effect of images, text, and sound in electronic journalism on the viewer, distinguishing the techniques used to achieve the effects in each instance studied

Speaking Applications (Genres and their Characteristics): Students deliver well-organized formal presentations employing traditional rhetorical strategies (i.e., narration, exposition, persuasion, and description). Student speaking demonstrates a command of standard English and the organization and delivery strategies.

- Deliver narrative presentations that: (1) develop a context, standard plot line (i.e., beginning, conflict, rising action, climax, denouement), and/or point of view; (2) describe complex major and minor characters and a definite setting; (3) use a range of appropriate strategies, including dialogue, suspense, and naming of specific narrative action (e.g., movement, gestures, expressions)
- Deliver oral summaries of articles and books that: (1) contain the main ideas of the event/article and the most significant details; (2) use the student's own words, except for material quoted from the source; (3) convey a comprehensive understanding of the source, not just the superficial details
- Deliver research presentations that: (1) pose relevant and concise questions about the topic; (2) convey clear and accurate perspectives on the subject; (3) include evidence generated through the formal research process (e.g., card catalogue, *Readers' Guide to Periodical Literature*, magazines, newspapers, dictionaries); (4) cite reference sources appropriately
- Deliver persuasive presentations that: (1) state a clear position or perspective in support of a proposition or proposal; (2) describe the points in support of the proposition, employing well-articulated evidence

POINTERS FOR PARENTS

LANGUAGE ARTS

- ⇒ *Read a variety of poetry and discuss the different forms of poetry with your child (e.g., haiku, limerick, lyric, sonnet).*
- ⇒ *Have your child read autobiographies, biographies, essays, novels, plays, and speeches.*
- ⇒ *Provide opportunities to have your child write about personal experiences, analyze literature, factual reports, argumentative essay, etc. Their main purpose is to capture their reader's attention.*
- ⇒ *Review prepositional phrases with your child and subject-verb agreement.*
- ⇒ *Let your child practice making oral presentations on a topic at home. Analyze content and delivery of speakers heard in person or in the media.*



PRE ALGEBRA

In seventh grade students are preparing for algebra, getting considerable practice at manipulating numbers and equations and understanding the general principles at work. They understand and use factoring of numerator and denominators and properties of exponents. They know the Pythagorean Theorem and solve problems where they compute the length of an unknown side. Students know how to compute the surface area and volume of basic 3-D objects and understand how they change under a change in scale. Students convert between different units of measurement. They know and use different representations of fractional numbers (fractions, decimals, and percent) and are proficient at changing from one to another. They increase their facility with ratio and proportion and compute percentages of increase and decrease and simple compound interest. They graph linear functions and understand the idea of slope and its relation to ratio.

Number Sense

Students know the properties of and compute with rational numbers expressed in a variety of forms.

- Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10), approximate numbers using scientific notation
- Range: 10^{-6} to 10^6 ; micro to mega with prefixes
- Add, subtract, multiply, and divide rational numbers, integers, fractions, and decimals and take rational numbers to whole number powers
- Add, subtract, multiply, and divide numbers in scientific notation
- Convert fractions to decimals and percents, and use these representations in estimation, computation, and applications
- Know the equivalencies between various representations of numbers in the above computations and applications (i.e. $1 \times 10^3 = 1/10^3 = 1/1000 = 0.001 = 0.1\%$)

- Differentiate between rational and irrational numbers
- Know that every fraction is either terminating or repeating decimal, and be able to convert terminating decimals into reduced fractions
- Calculate percent of increases and decreases of a quantity
- Solve problems that involve discounts, markups, commissions, profit, and simple compound interest
- Factor numbers into their primes
- Find the greatest common factor (GCF) and the least common multiple (LCM) of numbers and/or variables

Students use exponents, powers, and roots and use exponents in working with fractions.

- Understand negative whole number exponents. Multiply and divide expressions involving exponents with a common base
- Add and subtract fractions using factoring to find

common denominators

- Multiply, divide, and simplify fractions using exponent rules
- Use the inverse relationship between raising to a power and root extraction for perfect square integers; for integers which are not square, determine the two integers between which its square root lies, without a calculator; explain why
- Know the squares of numbers up to 16, and be able to determine the square root of any perfect square less than or equal to 256
- Understand the meaning of the absolute value of a number, interpret it as the distance of the number from zero on a number line, and determine the absolute value of real numbers

Measurement and Geometry

Students choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems.

- Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters)
- Construct and read scale drawings and models
- Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems, checking units of the solutions; use dimensional analysis to check the reasonableness of the answer

Students compute the perimeter, area, and volume of common geometric objects, and use these to find measures of less common objects; they know how perimeter, area, and volume are affected under changes of scale.

- Routinely use formulas for finding the perimeter and area of basic two-dimensional figures and for the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and circular cylinders

- Estimate and compute the area of more complex or irregular two- and three-dimensional figures by breaking them up into more basic geometric objects
- Compute the length of the perimeter, the surface area of the faces, and the volume of a 3-D object built from rectangular solids (understand that when the lengths of all dimensions are multiplied by a scale factor, the surface area is multiplied by the square of the scale factor and the volume is multiplied by the cube of the scale factor)
- Relate the changes in measurement under change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units ($1 \text{ square foot} = 12^2 \text{ square inches}$, $1 \text{ cubic inch} = 2.54^3 \text{ cubic centimeters}$)

Students know the Pythagorean Theorem and deepen their understanding of plane and solid geometric shapes by constructing figures that meet given conditions and by identifying attributes of figures.

- Identify and construct basic elements of geometric figures, (e.g., altitudes, midpoints, diagonals, angle bisectors, perpendicular bisectors, and central angles; radii, diameters, and chords of circles) using compass and straight-edge

- Construct perpendicular and parallel lines using straight edge and compass
- Recognize and name polygons up to 12 sides
- Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections
- Know and understand the Pythagorean Theorem; use it to find the length of the missing side of a right triangle and lengths of other line segments, and, in some situations, empirically verify the Pythagorean Theorem by direct measurement
- Demonstrate an understanding of when two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures
- Recognize similar polygons and, use proportions to determine similarity and the lengths of unknown sides
- Construct two-dimensional patterns for three-dimensional models such as cylinders, prisms, and cones
- Identify elements of three-dimensional geometric objects (e.g., diagonals of rectangular solids) and how two or more objects are related in space (e.g., skew lines, the possible ways three planes could intersect)

Statistics, Data Analysis, and Probability

Students collect, organize, and represent data sets that have one or more variables, and identify relationships among variables, within a data set both manually and by using an electronic spreadsheet program.

- Know various forms of display for data sets, including a stem-and-leaf plot, or box-and-whisker plot; use them to display a single set of data or compare two sets of data
- Represent two numerical variables on a scatter plot, informally describe how the data points

are distributed and whether there is an apparent relationship between the two variables (e.g. time spent on homework and grade level)

- Understand the meaning of and be able to compute the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set

Algebra and Functions

Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and their graphs.

- Use variables and appropriate operations to write an expression, equation, inequality, or system of equations or inequalities which represent a verbal description (e.g., three less than a number, half as large as area A)
- Use order of operations correctly to evaluate algebraic expressions such as $3(2x + 5)^2$;
- Simplify numerical expressions by applying properties of rational numbers (identity, inverse, distributive, associative, commutative), including the additive and multiplicative identity properties, the additive and multiplicative inverse properties, and the multiplicative property of zero; justify the process used
- Use algebraic terminology correctly (e.g., variable, equation, term, coefficient, inequality, expression, constant)
- Represent quantitative relationships graphically, and interpret the meaning of a special part of a graph in terms of the situation represented by the graph
- Evaluate algebraic expressions when the variables are given specific symbolic or numerical values
- Simplify expressions involving one or more variables

Students interpret and evaluate expressions involving integer powers and simple roots.

- Interpret positive whole number powers as repeated multiplication and negative whole numbers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents
- Multiply and divide monomials, extend the process of taking powers and extracting roots to monomials, when the latter results in a monomial with an integer exponent

Students graph and interpret linear and some non-linear functions.

- Graph functions of the form $y = nx^2$, and $y = nx^3$; use in solving problems
- Understand the definitions of the terms: *function, domain, range, x-axis, x-coordinate, y-coordinate, slope, x-intercept, and y-intercept*
- Plot the values from the volumes of a 3-D shape for various values of its edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and a varying length equilateral triangle base)
- Graph linear functions, noting that the vertical change (change in y-value) per unit horizontal change (change in x-value) is always the same, and know that the ratio ("rise over run") is called the slope of a graph
- Plot values of the quantities whose ratio is always the same (cost vs. number of an item, feet vs. inches, circumference vs. diameter of a circle). Fit a line to the plot, and understand that the slope of the line equals the quantities

Students solve simple linear equations and inequalities over the rational numbers.

- Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret and graph the solution(s) in terms of the context from which they arose, and verify the reasonableness of the results
- Solve multi-step problems involving rate, average speed, distance and time, or direct variation

Mathematical Reasoning

Students make decisions about how to approach problems.

- Analyze problems by identifying relationships, discriminating relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns
- Formulate and justify mathematical conjectures based upon a general description of the mathematical question or problem posed
- 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
- Estimate unknown quantities graphically, and solve for them using logical reasoning and arithmetic and algebraic techniques
- Make and test conjectures using both inductive and deductive reasoning
- 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 and terms and clear language; support solutions with evidence, in both verbal and symbolic work
- Indicate the relative advantages of exact and approximate solutions to problems; give answers to a specific degree of accuracy
- Make precise calculations; check the validity of the results from the context of the problem

Students determine a solution is complete and move beyond a particular problem by generalizing to other situations.

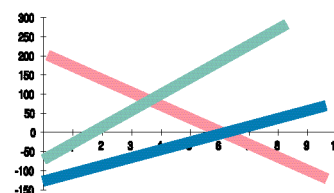
- Evaluate the reasonableness of the solution in the context of the original situation
- Note method of deriving the solution; demonstrate conceptual understanding of the derivation by solving similar problems
- Develop generalizations of the results obtained and the strategies used; extend them to new problem situations

POINTERS FOR PARENTS

MATH

⇒ Reinforce that any number that can be written as a fraction is a rational number. Provide opportunities for your child to work with this important group of numbers in their daily lives.

⇒ Practice graphing and solving linear equations with your child.



⇒ The Pythagorean Theorem explains the relationships between the sides of a right triangle. Explore the theorem and its uses with your child.

⇒ Remind your child that absolute value describes the distance of a number on a number line from 0. Introduce your child to this useful concept.

⇒ Always encourage your child to use software programs to help reinforce math skills (e.g. *Dr. Brain Action Reaction, Math and Music, Solid Gold Gnarly Math*).



History/Social Science

WORLD HISTORY AND GEOGRAPHY: MEDIEVAL AND EARLY MODERN TIMES

Students in grade seven study the social, cultural, and technological changes that occurred in Europe, Africa, and Asia from 500-1789 AD. After reviewing the ancient world and the ways in which archaeologists and historians uncover the past, students study the history and geography of great civilizations that were developing concurrently throughout the world during medieval and early modern times. They examine the growing economic interaction among civilizations as well as the exchange of ideas, beliefs, technologies, and commodities. They learn about the resulting growth of Enlightenment philosophy and the new examination of the concepts of reason and authority, the natural rights of human beings and the divine right of kings, experimentalism in science and the dogma of belief. Finally, students assess the political forces let loose by the Enlightenment, particularly the rise of democratic ideas, and they learn about the continuing influence of these ideas in the world today.

Students analyze the causes and effects of the vast expansion and ultimate disintegration of the Roman Empire, in terms of:

- The early strengths and lasting contributions of Rome (e.g., significance of Roman citizenship; rights under Roman law; Roman art, architecture, engineering, and philosophy; preservation and transmission of Christianity) and its ultimate internal weaknesses (e.g., rise of autonomous military powers within the empire, undermining of citizenship by the growth of corruption and slavery, lack of education, and distribution of news)
- The geographic borders of the empire at its height and the factors that threatened its territorial cohesion
- The establishment by Constantine of the new capital in Constantinople and the development of the Byzantine Empire with an emphasis on the consequences of the development of two distinct European civilizations, Eastern Orthodox and Roman Catholic, with two distinct views on church-state relations

Students analyze the geographic, political, economic, religious, and social structures of civilizations of Islam in the Middle Ages, in terms of:

- The physical features and climate of the Arabian peninsula, its relationship to surrounding bodies of land and water, and the relationship between nomadic and sedentary ways of life
- The origins of Islam and the life and teachings of Muhammad, including Islamic teachings on the connection with Judaism and Christianity
- The significance of the Qur'an and the Sunnah as the primary sources of Islamic beliefs, practice and law, and their influence in Muslims' daily life
- The expansion of Muslim rule through military conquests and treaties, emphasizing the cultural blending within Muslim civilization and the spread and acceptance of Islam and the Arabic language
- The growth of cities and the trade routes created among Asia, Africa, and Europe, the products and inventions that traveled along these routes (e.g., spices, textiles, paper, steel, new crops), and the role of merchants in Arab society
- The intellectual exchanges among Muslim scholars of Eurasia and Africa and the contributions Muslim scholars made to later civilizations in the areas of science, geography, mathematics, philosophy, medicine, art, and literature

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of China in the Middle Ages in terms of:

- The reunification of China under the Tang Dynasty and reasons for the spread of Buddhism in Tang China, Korea, and Japan
- Agricultural, technological, and commercial developments during the Tang and Sung periods
- The influences of Confucianism and changes in Confucian thought during the Sung and Mongol periods
- The importance of both overland trade and maritime expeditions between China and other civilizations in the Mongol Ascendancy and Ming Dynasty
- The historic influence of such discoveries as tea, the manufacture of paper, wood block printing, the compass, and gunpowder
- The development of the imperial state and the scholar-official class

Students analyze the geographic, political, economic, religious, and social structures of the Sub-Saharan civilizations of Ghana and Mali in Medieval Africa, in terms of:

- The Niger River and the vegetation zones of forest, savannah, and desert and the relationship of these features to the trade in gold, salt, food, and slaves; the growth of the Ghana and Mali empires

- The importance of family, labor specialization, and regional commerce in the development of states and cities in West Africa
- The role of the trans-Saharan caravan trade in the changing religious and cultural characteristics of West Africa, and the influence of Islamic beliefs, ethics, and law
- The growth of Arabic as a language of government, trade, and Islamic scholarship in West Africa
- The importance of written and oral traditions in the transmission of African history and culture

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Medieval Japan, in terms of:

- The significance of Japan's proximity to China and Korea and the intellectual, linguistic, religious, and philosophical influence of those countries on Japan
- The reign of Prince Shotoku of Japan and the characteristics of Japanese society and family life
- The values, social customs, and traditions prescribed by the lord-vassal system consisting of shogun, daimyo, and samurai and the lasting influence of the warrior code in the 20th century
- The development of distinctive forms of Japanese Buddhism
- The ninth and tenth century golden age of literature, art, and drama, and its lasting effects on culture today, including Murasaki Shikibu's Tale of Genji
- The rise of a military society in the late twelfth century and the role of the samurai

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Medieval Europe, in terms of:

- The geography of the Europe and the Eurasian land mass, including its location, topography, waterways, vegetation, and climate and relationship to ways of life in ancient Europe and during the Roman Empire
- The spread of Christianity north of the Alps and the role played by the early Church and by monasteries in its diffusion after the fall of Rome
- The development of feudalism, its operation in the medieval European economy, the way in which it was influenced by physical geography (the role of the manor and the growth of towns), and how feudal relationships provided the foundation of political order
- The conflict and cooperation between the Papacy and European monarchs (e.g., Charlemagne, Gregory VII, Emperor Henry IV)
- The significance of developments in medieval English legal and constitutional practices and their importance in the rise of modern democratic thought and representative institutions (e.g., Magna Carta, parliament, development of habeas corpus, an independent judiciary in England)
- The causes and course of the Religious Crusades and the effects on Christian, Muslim, and Jewish populations in Europe with emphasis on the increasing contact with the cultures of the Eastern Mediterranean world
- Mapping the spread of the Bubonic Plague from Central Asia to China, the Middle East, and Europe and its impact on global population
- The importance of the Catholic church as a political, intellectual, and aesthetic institution (e.g., founding of universities, the political and spiritual role of the clergy, creation of monastic and mendicant religious orders, preservation of Latin language and religious texts, St. Thomas Aquinas' synthesis of classical philosophy with Christian theology and the concept of "natural law")
- The history of the decline of Muslim rule in the Iberian Peninsula that culminated in the "Reconquista" and the rise of Spanish and Portuguese Kingdoms

Students compare and contrast the geographic, political, economic, religious, and social structures of the Mesoamerican and Andean civilizations, in terms of:

- The locations, landforms, and climates of Mexico, Central America, and South America and their effects upon Mayan, Aztec, and Incan economies, trade, and development of urban societies
- The roles of people in each society, including class structures, family life, warfare, religious beliefs and practices, and slavery
- How and where each empire arose and how the Aztec and Inca empires were defeated by the Spanish
- The artistic and oral traditions and architecture in the three civilizations
- The Mesoamerican achievements in astronomy and mathematics, including the development of the calendar and the Mesoamerican knowledge of seasonal changes to the civilizations' agricultural systems

Students analyze the origins, accomplishments, and geographic diffusion of the Renaissance, in terms of:

- The way in which the revival of classical learning and the arts affected a new interest in "humanism" (i.e., a balance between the intellect and religious faith)
- The importance of Florence in the early stages of the Renaissance and the growth of independent trading cities (e.g., Venice) with emphasis on their importance in the spread of Renaissance ideas
- The effects of re-opening of the ancient "Silk Road" between Europe and China, including Marco Polo's travels and the location of his routes
- The growth and effect of ways of disseminating information (e.g., the ability to manufacture paper, translation of the Bible into the vernacular, printing)
- Advances in literature, the arts, science, mathematics, cartography, engineering, and the understanding of human anatomy and astronomy (e.g., biographies of Dante, da Vinci, Michelangelo, Gutenberg, Shakespeare)

Students analyze the historical developments of the Reformation, in terms of:

- The causes for the internal turmoil and weakening of the Catholic church (e.g., tax policies, selling of indulgences)
- The theological, political, and economic ideas of the major figures during the Reformation (e.g., Erasmus, Martin Luther, John Calvin, William Tyndale)
- The influence of new practices of church self-government among Protestants on the development of democratic practices and ideas of federalism
- The location and identification of European regions that remained Catholic and those that became Protestant and how the division affected the distribution of religions in the New World
- How the Counter-Reformation revitalized the Catholic church and the forces that propelled the movement (e.g., St. Ignatius of Loyola and the Jesuits, the Council of Trent)
- The institution and impact of missionaries on Christianity and the diffusion of Christianity from Europe to other parts of the world in the medieval and early modern periods, including their location on a world map
- The "Golden Age" of cooperation between Jews and Muslims in Medieval Spain which promoted creativity in art, literature, and science, including how it was terminated by the religious persecution of individuals and groups (e.g., the Spanish Inquisition and the expulsion of Jews and Muslims from Spain in 1492)

Students analyze the historical developments of the Scientific Revolution and its lasting effect on religious, political, and cultural institutions, in terms of:

- The roots of the scientific revolution (e.g., Greek rationalism; Jewish, Christian, and Muslim science; Renaissance humanism, new knowledge from global exploration)
- The significance of the new scientific theories (e.g., Copernicus, Galileo, Kepler, Newton) and the significance of inventions (e.g., telescope, microscope, thermometer, barometer)
- The scientific method advanced by Bacon and Descartes, the influence of new scientific rationalism on the growth of democratic ideas and the coexistence of science with traditional religious beliefs

Students analyze political and economic change in the sixteenth, seventeenth, and eighteenth centuries (Age of Exploration, the Enlightenment, and the Age of Reason), in terms of:

- The great voyages of discovery, the location of the routes, and the influence of cartography in developing a new European world view
- The exchanges of plants, animals, technology, culture, and ideas among Europe, Africa, Asia, and the Americas in the 15th and 16th centuries and the major economic and social effects on each continent
- The origins of modern capitalism, the influence of mercantilism and cottage industry, the elements and importance of a market economy in seventeenth-century Europe, and the changing international trading and marketing patterns, including their location on a world map and the influence of explorers and map makers
- How the main ideas of the Enlightenment can be traced back to such movements as the Renaissance, the Reformation, and the Scientific Revolution and to the Greeks, Romans, and Christianity
- How democratic thought and institutions were influenced by Enlightenment thinkers (e.g., Locke, Montesquieu, American founders)
- How the principles in the Magna Carta were embodied in such documents as the English Bill of Rights and the American Declaration of Independence

Science

FOCUS ON LIFE SCIENCE

Cell Biology

All living organisms are composed of cells, from just one to many trillions, whose details usually are visible only through a microscope. As a basis for understanding this concept, students know:

- Cells function similarly in all living organisms
- The characteristics that distinguish plant cells from animal cells, including chloroplasts and cell walls
- The nucleus is the repository for genetic information in plant and animal cells
- Mitochondria liberate energy for the work that cells do, and chloroplasts capture sunlight energy for photosynthesis
- Cells divide to increase their numbers through a process of mitosis, which results in two daughter cells with identical sets of chromosomes
- As multicellular organisms develop, their cells differentiate

Genetics

A typical cell of any organism contains genetic instructions that specify its traits. Those traits may be modified by environmental influences. As a basis for understanding this concept, students know:

- The differences between the life cycles and reproduction of sexual and asexual organisms
- Sexual reproduction produces offspring that inherit half their genes from each parent
- An inherited trait can be determined by one or more genes
- Plant and animal cells contain many thousands of different genes, and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive
- DNA is the genetic material of living organisms, and is located in the chromosomes of each cell

Evolution

Biological evolution accounts for the diversity of species developed through gradual processes over many generations. As a basis for understanding this concept, students know:

- Both genetic variation and environmental factors are causes of evolution and diversity of organisms
- The reasoning used by Darwin in making his conclusion that natural selection is the mechanism of evolution
- How independent lines of evidence from geology, fossils, and comparative anatomy provide a basis for the theory of evolution
- How to construct a simple branching diagram to classify living groups of organisms by shared derived characteristics, and expand the diagram to include fossil organisms
- Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient for its survival

Earth and Life History (Earth Science)

Evidence from rocks allows us to understand the evolution of life on Earth. As the basis for understanding this concept, students know:

- Earth processes today are similar to those that occurred in the past, and slow geologic processes have large cumulative effects over long periods of time
- The history of life on Earth has been disrupted by major catastrophic events, such as major volcanic eruptions or the impact of an asteroid
- The rock cycle includes the formation of new sediment and rocks. Rocks are often found in layers with the oldest generally on the bottom
- Evidence from geologic layers and radioactive dating indicate the Earth is approximately 4.6 billion years old and that life has existed for more than 3 billion years
- Fossils provide evidence of how life and environmental conditions have changed

- How movements of the Earth's continental and oceanic plates through time, with associated changes in climate and geographical connections, have affected the past and present distribution of organisms
- How to explain significant developments and extinction's of plant and animal life on the geologic time scale

Structure and Function in Living Systems

The anatomy and physiology of plants and animals illustrate the complementary nature of structure and function. As a basis for understanding this concept, students know:

- Plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism
- Organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system
- How bones and muscles work together to provide a structural framework for movement
- How the reproductive organs of the human female and male generate eggs and sperm, and how sexual activity may lead to fertilization and pregnancy
- The function of the umbilicus and placenta during pregnancy
- The structures and processes by which flowering plants generate pollen and ovules, seeds, and fruit
- How to relate the structures of the eye and ear to their functions

Physical Principles in Living Systems (Physical Science)

Physical principles underlie biological structures and functions. As a basis for understanding this concept, students know:

- Visible light is a small band within a very broad electromagnetic spectrum
- For an object to be seen, light emitted by or scattered from it must enter the eye
- Light travels in straight lines except when the medium it travels through changes
- How simple lenses are used in a magnifying glass, the eye, camera, telescope, and microscope
- White light is a mixture of many wavelengths (colors), and that retinal cells react differently with different wavelengths
- Light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection)
- The angle of reflection of a light beam is equal to the angle of incidence
- How to compare joints in the body (wrist, shoulder, thigh) with structures used in machines and simple devices (hinge, ball-and-socket, and sliding joints)
- How levers confer mechanical advantage and how the application of this principle applies to the musculoskeletal system
- Contractions of the heart generate blood pressure, and heart valves prevent backflow of blood in the circulatory system

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 of the other three strands, students should develop their own questions and perform investigations. Students will:

- Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data
- Utilize a variety of print and electronic resources (including the World Wide Web) to collect information as evidence as part of a research project
- Communicate the logical connection among hypothesis, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence
- Construct scale models, maps, and appropriately labeled diagrams to communicate scientific knowledge (e.g., motion of Earth's plates and cell structure)
- Communicate the steps and results from an investigation in written reports and verbal presentations

POINTERS FOR PARENTS

HISTORY/SOCIAL SCIENCE

- ⇒ *Have your child write an editorial about a time in history he is studying (e.g., The Development of the Reformation). Write a response back to him.*
- ⇒ *Film your child doing a TV broadcast on a time period he is studying (e.g., China in the Middle Ages).*
- ⇒ *Have educational debates with your child on issues being studied (e.g., The Spanish Inquisition).*
- ⇒ *Research major cities, regional characteristics, population distribution, and physical features on maps. Try to use an atlas as your resource. Have a discussion on how the physical features have affected the location of cities and transportation routes.*
- ⇒ *Map out a trip to Europe with your child and highlight points of interest you may enjoy sightseeing. (You may enjoy using the Internet and/or a Frommers or Fodors guide to help plan your trip). Plan another trip during ancient Europe during the Roman Empire. Compare and contrast the trips during the two different time periods.*

SCIENCE

- ⇒ *Help your child delve into a more in-depth look at properties of sound waves, that they can be measured in terms of amplitude, frequency, speed, and wavelength.*
- ⇒ *Help your child be aware that scientific knowledge is always based on solid evidence. It is open to investigation, modifications, etc., if new evidence is found. It is important in the scientific process to question others' ideas, respond to criticism, debate different theories, to help search for the answer(s).*
- ⇒ *Have your child experiment and help you find out how a plant is affected by different levels of acidity in the soil.*
- ⇒ *Have your child use references such as the Internet to study and keep track of the positions of hurricanes, tornadoes, and tropical storms on a tracking map. Keep a journal of your findings.*
- ⇒ *Look up possible science fair projects of interest on the Internet and do a couple for fun at home. Encourage your child to explore science in a variety of ways. Writing and math is easily integrated into this subject area. Findings may need to have supporting evidence and this may be a great opportunity to use a persuasive essay.*

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.



Board of Education

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