

Knowledge and Skills for Language Arts

Word Analysis & Systematic Vocabulary 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

- Understand and analyze the differences among various categories of informational materials (e.g., textbooks, newspapers, instructional manual, signs) in terms of their structure and purpose.
- Locate information using a variety of consumer, workplace, and public documents (student's handbook, job applications, warranties).
- Analyze text which uses cause and effect patterns.
- Identify and trace the development of an author's argument, point of view, or perspective in text.
- Understand and explain the use of a literary device such as metaphor imagery, personification, etc. by following technical directions.
- Assess the adequacy, accuracy, and appropriateness of the author's evidence to support claims and assertions, noting instances of bias and stereotype.

Literary Response & Analysis

- Articulate the expressed purposes and characteristics of different forms of prose (short story, novel, novella, essay).
- Identify events that advance the plot, and determine how each event explains past or present action(s) or foreshadows future action(s).
- Analyze characterization 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).
- 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 Strategies

- 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.
- 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.

- Create documents using word-processing skills and publishing programs, and develop simple databases and spreadsheets to manage information and prepare reports.
- Revise writing to improve organization and word choice after checking the logic of the ideas and the precision of the vocabulary.

Writing Applications

- Write fictional or autobiographical narratives that (1) develop a standard plot line (beginning, conflict, rising action, climax, conclusion 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 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 catalog, Reader's Guide to Periodical Literature, computer catalog, 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

- Place modifiers properly, and use active voice.
- 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 clause, (4) appropriate usage (e.g., pronoun reference).
- Identify and use hyphen, dash, brackets, and semi-colon between two clauses of a compound sentence that are not joined by a conjunction.
- Use correct capitalization.
- Spell derivatives correctly by applying the spellings of bases and affixes.

Listening and Speaking Strategies

- 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 affirmation.
- 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.
- 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

- 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 topics, (2) convey clear and accurate perspectives on the subject, (3) include evidence generated through the formal research process (e.g., card catalog, Reader's Guide to Periodical Literature, computer catalog, 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.

Knowledge and Skills for

Mathematics

Number Sense

- Read, write, and compare rational numbers in scientific notation (positive and negative powers of ten), approximate numbers using scientific notation.
- +, -, x and ÷ rational numbers, integers, fractions, and decimals and take rational numbers to whole number power.
- Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.
- Differentiate between rational and irrational numbers.
- Know that every fraction is either a 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.
- Understand negative whole number exponents x and ÷ expressions involving exponents with a common base.
- + and – fractions using factoring to find common denominators.
- X, ÷ and simplify fractions using exponent rules.
- Use the inverse relationship between raising to a power and root extraction for perfect square integers; and, for integers which are not square, determine without a calculator, the two integers between which its square root lies, and explain why.

- 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.

Algebra and Functions

- Use variables and appropriate operation to write an expression, equation, inequality, or system of equations or inequalities which represent a verbal description.
- Use order of operations correctly to evaluate algebraic expressions such as $3(2x + 5)$.
- Simplify numerical expressions by applying properties of rational numbers (*identity, inverse, distributive, associative, commutative) and justify the process used.
- Use algebraic terminology correctly.
- Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in terms of the situation represented by the graph.
- 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 of monomials, when the latter results in a monomial with an integer exponent.
- Graph functions of the form $y = nx$ and $y = -nx$ and use in solving problems.
- Plot the values from the volumes of a 3-D shape for various values of its edge lengths.
- 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.
- Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret 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.

Measurement and Geometry

- Compare weights, capacities, geometric measures, times and temperatures within and between measurement systems.
- Construct and read scale drawings and modes.
- Routinely use formulas for finding the perimeter and areas of basic two-dimensional figures and for the surface area and volume of basic three-dimensional figures.
- 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 and to conversions between units.
- Identify and construct elements of geometric figures, using compass and straightedge.

- Understand and use coordinate graphs to plot simple figures, determine lengths and area related to them, and determine their image under translations and reflections.
- Know and understand the Pythagorean Theorem and use it to find the length of the missing side of a right triangle and lengths of other line segments; and, in some situations, 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.
- Construct two-dimensional patterns for three-dimensional models such as cylinders, prisms and cones.
- Identify elements of three-dimensional geometric objects and how two or more objects are related in space.

Statistics, Data, Analysis, and Probability

- 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 and informally describe how the data points are distributed and whether there is an apparent relationship between the two variables.
- 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.

Problem Solving and Mathematical Reasoning

- 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.
- 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, 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 specified degree of accuracy.
- Make precise calculations and check the validity of the results from the context of the problem.
- 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 the strategies used and extend them to new problem situations.

**Pajaro Valley Unified School
District**

Language Arts and Mathematics

**Standards
For
Grade 7**