OREGON EDUCATOR LICENSURE ASSESSMENTS®

MULTIPLE SUBJECTS EXAMINATION

TEST FRAMEWORK

August 2004

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TEST FRAMEWORK

Language Arts
Social Science
The Arts
Reading Instruction
Mathematics
Science
Health and Physical Education

LANGUAGE ARTS

0001 Understand the effective expression of information and ideas through oral and visual communication.

For example:

- identifying methods of organizing and presenting ideas, information, and feelings when speaking to diverse audiences and for various purposes
- recognizing elements of nonverbal communication including their uses in different cultural contexts for specific audiences and/or purposes
- recognizing elements of visual language (e.g., symbols, shapes, colors)
- demonstrating knowledge of principles of active listening and of barriers to effective listening
- demonstrating knowledge of structures of oral, visual, and multimedia presentations (e.g., sequence, connections, transitions)
- recognizing the principles of using spoken and visual language for a variety of purposes (e.g., learning, enjoyment, persuasion, exchanging ideas)

0002 Understand the effective expression of information and ideas through writing and the appropriate elements and conventions of standard written English.

For example:

- demonstrating knowledge of elements of the writing process (e.g., brainstorming, drafting, revising, publishing) and techniques for taking notes and developing drafts
- describing characteristics of and purposes for different writing forms (e.g., essays, stories, reports) and modes (e.g., narrative, imaginative, expository, persuasive)
- recognizing elements of sentence and paragraph structure and formatting
- demonstrating knowledge of the use of introductions, main ideas, transitions, conclusions, and other forms of text organization in writing
- applying elements of appropriate grammar and usage (e.g., noun-pronoun agreement, subject-verb agreement, consistent verb tense)
- applying elements of appropriate punctuation and capitalization (e.g., commas, apostrophes, quotation marks)

0003 Understand features and forms of literature.

For example:

- identifying characteristics of literary forms (e.g., poetry, plays, novels, short stories) and genres (e.g., science fiction, mystery, historical fiction)
- identifying characteristics of genres of nonfiction (e.g., essays, biographies, autobiographies, informational text)
- identifying characteristics and functions of literary elements and devices (e.g., setting, plot, dialect, point of view, symbolism)
- recognizing influences of cultural, social, biographical, and historical factors on the creation and development of literature
- demonstrating knowledge of genres, themes, authors, and works of literature written for children and adolescents
- recognizing influence of nontraditional literary forms (e.g., editorial cartoons, media, advertising)

0004 Understand research methods.

For example:

- demonstrating knowledge of strategies for developing topics, questions, and purposes for inquiry prior to planning for and conducting research
- demonstrating knowledge of strategies for gathering, analyzing, synthesizing, and evaluating data from a variety of sources (e.g., print and nonprint texts, artifacts, people, libraries, databases, computer networks, videos)
- analyzing ethical issues related to the use of resources, human subjects, materials, and the Internet (e.g., copyright, citations)

SOCIAL SCIENCE

0005 Understand important theories, concepts, and terminology related to civics and government.

For example:

- recognizing the purposes of government and the basic constitutional principles of the U.S. government as a republic
- identifying the responsibilities and interrelationships among national, state, and local governments in the United States
- identifying roles and powers of the executive, legislative, and judicial branches
- identifying the roles, rights, responsibilities, and participatory obligations of U.S. citizens, resident aliens, immigrants, and refugees
- recognizing different ways that governments are organized and hold power, and ways in which individuals, groups, and international organizations influence government
- recognizing ways in which the U.S. government relates to and interacts with other nations

0006 Understand important theories, concepts, and terminology related to economics.

For example:

- recognizing the economic concepts of scarcity and supply and demand, and the purposes and functions of currency in the economy
- recognizing that trade-offs and opportunity costs are decisions that can be measured in terms of costs and benefits
- identifying the underlying philosophies and characteristics of various economic systems, including that of the U.S. economy
- identifying the role of government and institutions in an economy, and ways in which the U.S. economy relates to and interacts with the economies of other nations
- identifying the knowledge and skills necessary to make reasoned and responsible financial decisions as a consumer, producer, saver, and investor in a market economy

0007 Understand important theories, concepts, and terminology related to geography.

For example:

- applying knowledge of spatial concepts of geography (e.g., location, distance, direction, scale, region)
- applying knowledge of the purpose of maps, globes, and geographic tools, and locating major physical and human-constructed features of the earth
- applying knowledge of physical and population characteristics of places and regions, the processes that have shaped them, and their geographic significance
- describing the distribution and movement of people, ideas, and products, and evaluating the consequences of population changes resulting from economic, political, cultural, and/or environmental factors (e.g., globalization)
- identifying how humans affect physical environments, and how physical characteristics and changes in the environment affect human activities

0008 Understand important events, concepts, and terminology related to world history.

For example:

- recognizing chronological relationships and patterns of change and continuity over time in world history
- demonstrating knowledge of early civilizations, including the development of empires and kingdoms (e.g., Africa, imperial China, feudal Japan, the Americas)
- recognizing the importance and lasting influence of events (e.g., the development of major world religions, the Industrial Revolution), issues (e.g., colonialism, imperialism, nationalism), and developments (e.g., the Renaissance, the Cold War) in world history
- recognizing the importance and lasting influence of major world conflicts
- analyzing cause-and-effect relationships in world history
- analyzing various perspectives and interpretations of events, issues, and developments in world history

0009 Understand important events, concepts, and terminology related to the history of the United States and the state of Oregon.

For example:

- recognizing chronological relationships and patterns of change and continuity over time in U.S. and Oregon history
- recognizing the importance and lasting influence of people, events, issues, and developments in Oregon history (e.g., indigenous peoples of the region, the Lewis and Clark Expedition, nineteenth-century westward migration, human rights policies and practices, the use and conservation of natural resources)
- recognizing the importance and lasting influence of events, issues, and developments in U.S. history (e.g., American Revolution, Constitutional Convention, European immigration, Irish Potato Famine, Mexican War, slavery, the Civil War, Asian migration, child labor laws, women's suffrage, territorial expansion and imperialism, the Great Depression, the civil rights movement)
- analyzing cause-and-effect relationships in the history of the United States and Oregon
- analyzing various perspectives and interpretations of issues and events in U.S. and Oregon history
- demonstrating knowledge of strategies for interpreting events, issues, and developments in local history

0010 Understand methods of social science research and analysis.

For example:

- recognizing methods for analyzing an event, issue, problem, or phenomenon and its significance to society
- identifying strategies for gathering, using, and evaluating information to support analysis and conclusions
- identifying approaches for analyzing an event, issue, problem, or phenomenon from multiple perspectives
- recognizing methods for analyzing characteristics, causes, and consequences of an event, issue, problem, or phenomenon
- recognizing ways of comparing and evaluating outcomes, responses, or solutions, and using the results to reach conclusions and drive further inquiry

THE ARTS

0011 Understand techniques and materials associated with the visual arts and the cultural, political, and historical significance of the visual arts.

For example:

- recognizing basic terms and elements of the visual arts
- identifying media, techniques, and processes used in the visual arts
- identifying how cultural, political, and historical contexts influence works from the visual arts

0012 Understand techniques and materials associated with theatre and dance and the cultural, political, and historical significance of theatre and dance.

For example:

- identifying the basic nature, materials, elements, and means of communicating in theatre (e.g., dramatic media, musical theatre, dance, music)
- identifying elements and skills in performing dance (e.g., balance, articulation of isolated body parts, weight shift)
- recognizing the role of theatre, film, television, and electronic media in the past and the present
- recognizing elements of dance from different styles or traditions
- identifying connections among dance, theatre, and other disciplines taught in school

0013 Understand techniques and materials associated with music and the cultural, political, and historical significance of musical genres and styles.

For example:

- recognizing basic principles of music (e.g., meter, rhythm, chords, melody)
- identifying distinguishing characteristics of musical genres and styles from various cultures
- recognizing the roles and functions of music in different cultures
- identifying connections between music and other arts and other disciplines taught in school

READING INSTRUCTION

0014 Understand phonological and phonemic awareness.

For example:

- demonstrating knowledge of phonological awareness (i.e., the awareness that oral language comprises units such as spoken words and syllables)
- demonstrating knowledge of phonemic awareness (i.e., a specific type of phonological awareness involving the ability to distinguish the individual sounds that make up a spoken word)
- demonstrating knowledge of the significance of phonological and phonemic awareness in emergent literacy development and strategies for promoting students' phonological and phonemic awareness
- demonstrating knowledge of phonemic awareness skills (e.g., segmenting a spoken word into phonemes, blending phonemes to form a spoken word, deleting or substituting phonemes)

0015 Understand the use of phonics and other word-identification strategies.

For example:

- recognizing how beginning readers learn to apply knowledge of letter-sound correspondence to decode simple words
- describing how beginning readers use knowledge of common consonant-vowel patterns in single-syllable words to decode unfamiliar words through analogy with known words
- demonstrating knowledge of syllabication as a technique for identifying unfamiliar words containing more than one syllable
- applying knowledge of structural analysis as a word-identification strategy (e.g., identifying base words, roots, and inflections; identifying prefixes and suffixes)
- recognizing strategies for identifying high-frequency sight words with irregular spellings
- recognizing how readers use context, including semantic and syntactic clues, to help identify words, including words with multiple meanings
- demonstrating knowledge of curriculum materials and effective instruction in word-identification strategies for learners at various stages of literacy and from different cultural and language backgrounds

0016 Understand the development of vocabulary knowledge and skills.

For example:

- demonstrating knowledge of criteria for selecting appropriate vocabulary words (e.g., key words, words that are conceptually related, synonyms and antonyms, idioms, colloquial expressions) to increase students' vocabulary knowledge
- demonstrating knowledge of a range of strategies for promoting and reinforcing students' oral and written vocabulary knowledge (e.g., read-alouds, word sorts, word banks, semantic mapping, knowledge of words that form common word roots in English)
- recognizing ways to help students make effective use of reference sources (e.g., dictionaries, thesauruses, glossaries) to clarify understanding of a word's denotative and connotative meanings
- demonstrating knowledge of the role of vocabulary development in reading comprehension
- demonstrating knowledge of curriculum materials and effective instruction in vocabulary knowledge and skills for learners at various stages of literacy and from different cultural and language backgrounds

0017 Understand reading comprehension and fluency.

For example:

- demonstrating knowledge of literal comprehension (e.g., sequence of events in a narrative), inferential comprehension (e.g., drawing conclusions), and evaluative comprehension (e.g., analyze author's motivation and purpose)
- applying knowledge of strategies for promoting students' literal, inferential, and evaluative comprehension
- demonstrating knowledge of reading phrasing, rate, and expression as part of fluency
- recognizing the role of automatic word recognition in reading fluency and the relationship between reading fluency and reading comprehension
- applying knowledge of strategies for promoting students' reading comprehension
- demonstrating knowledge of curriculum materials and effective instruction in reading comprehension and fluency for learners at various stages of literacy and from different cultural and language backgrounds

0018 Understand reading comprehension strategies for literary and informational text.

For example:

- recognizing how to apply comprehension strategies before reading (e.g., making predictions, previewing), during reading (e.g., self-questioning to monitor understanding, skimming, scanning), and after reading (e.g., retelling, summarizing) to promote understanding of literary and informational text
- demonstrating knowledge of literary response skills (e.g., connecting elements in a literary text to personal experience and other text)
- demonstrating knowledge of common patterns of organization in informational text (e.g., chronological, compare-and-contrast, cause-and-effect)
- describing the use of writing activities (e.g., note taking, outlining, summarizing, semantic maps, K-W-L charts) to promote comprehension of informational text
- demonstrating knowledge of curriculum materials and effective instruction in reading comprehension of literary and informational text for learners at various stages of literacy and from different cultural and language backgrounds

MATHEMATICS

0019 Understand mathematical communication.

For example:

- interpreting mathematical terminology, symbols, and representations
- connecting everyday language to mathematical language and symbols
- using visual (e.g., graphs, drawings), numeric, and symbolic representations to communicate mathematical concepts
- converting among visual (e.g., graphs, drawings), numeric, and symbolic representations

0020 Understand numbers, number theory, and numeration.

For example:

- demonstrating knowledge of the concepts of place value, prime numbers, multiples, factors, and integer numbers
- recognizing numbers represented by exponential and scientific notation in context
- applying concepts of numbers and numeration to compare, order, and round up or down
- identifying equivalent forms of fractions, decimals, and percentages

0021 Understand mathematical problem solving.

For example:

- making use of pictures, models, charts, graphs, and symbols as tools of mathematical problem solving
- identifying and using relevant information in a problem to solve it
- recognizing and applying multiple solution strategies to problem solving
- evaluating calculations and problem-solving strategies to verify the accuracy of the results

0022 Understand methods of mathematical operations, calculation, and estimation.

For example:

- using the basic four operations with variables and numbers
- recognizing relationships among mathematical operations
- applying properties of real numbers and the number system (e.g., commutative, associative)
- making calculations with whole numbers, decimals, fractions, and integer numbers
- applying methods of approximation and estimation (e.g., rounding)
- identifying strategies for estimating solutions and for evaluating the accuracy of estimated solutions
- recognizing methods and tools for computing with numbers (e.g., mental calculation, paper and pencil, calculator, computer)

0023 Understand and apply concepts and methods of measurement.

For example:

- identifying and using appropriate procedures and units of measurement for problems involving length, area, volume, weight, angles, time, and temperature
- identifying and using appropriate measurement tools in various situations
- demonstrating knowledge of conversions within and between measurement systems
- identifying approaches to direct measurement through standard and nonstandard units and indirect measurement through the use of algebra or geometry

0024 Understand patterns, relationships, and algebraic concepts.

For example:

- defining and describing patterns and relationships using various representations (e.g., numbers, symbols, variables, visual representations)
- solving linear and nonlinear equations and inequalities
- identifying algebraic concepts of relation and function (e.g., domain, range) to analyze mathematical relationships
- representing relationships among variables using words, tables, graphs, and rules
- making use of algebraic functions to plot points, describe graphs, determine slope, and extrapolate

0025 Understand and apply principles and properties of geometry.

For example:

- recognizing the geometric properties of and relationships between two- and three-dimensional figures
- applying knowledge of basic geometric concepts (e.g., symmetry, similarity, congruence)
- identifying and measuring component parts of geometric figures (e.g., angles, lines, segments)
- applying knowledge of symmetry and transformations (i.e., translation, glide, rotation, reflection) of geometric figures
- making use of geometric models and properties of figures to solve problems

0026 Understand concepts and applications of probability.

For example:

- recognizing real-world applications of probabilities and their consequences
- recognizing expressions of probabilities as fractions, ratios, and decimals
- determining theoretical probabilities and making predications based on them
- determining probabilities of dependent and independent events
- making use of tools (e.g., spinners, dice) to estimate probabilities

0027 Understand concepts and applications of statistics.

For example:

- applying knowledge of methods for organizing data in a variety of formats (e.g., frequency distributions, charts, tables, stem and leaf plots, bar graphs, histograms, line graphs, circle graphs)
- interpreting statistical data expressed in various formats
- identifying assumptions, trends, and patterns in data
- recognizing limitations of data and models and their use in drawing conclusions
- describing data using standard measures (e.g., mean, median, mode, range, variability)

0028 Understand the nature and histories of mathematics.

For example:

- recognizing the histories and importance of mathematical ideas and the contribution of various cultures and individuals to mathematical knowledge
- identifying inherent values of mathematics (e.g., patterns, justifications, proofs)
- identifying the roles and importance of mathematics in everyday life and in various occupations

SCIENCE

0029 Understand concepts and principles of physical science.

For example:

- recognizing the structure and properties of matter (e.g., boiling and melting points, solubility, density)
- identifying chemical and physical changes
- identifying fundamental forces and the motions resulting from them
- recognizing concepts of conservation and transfer of energy, and analyzing the interaction of energy and matter
- recognizing basic principles of electricity and magnetism
- identifying the characteristics of light and sound

0030 Understand concepts and principles of life science.

For example:

- recognizing the characteristics, structure, and functions of organisms
- analyzing the life cycles of common organisms (e.g., butterfly, frog)
- analyzing the transmission of traits in living things
- recognizing the interdependence of organisms in their natural environment
- analyzing the effects of species, including humans, on an ecosystem
- recognizing the diversity of organisms and the adaptations that help organisms survive

0031 Understand concepts and principles of earth and space science.

For example:

- recognizing the structure of Earth's lithosphere, hydrosphere, and atmosphere
- identifying the properties of Earth's materials, and the availability and use of those materials
- analyzing changes occurring within Earth's lithosphere, hydrosphere, and atmosphere and interactions among those systems
- analyzing the relationships among the Earth, sun, moon, and solar system (e.g., seasons, tides, eclipses)
- recognizing changes that have occurred in Earth's history (e.g., glaciation, mass extinction, plate tectonics)

0032 Understand concepts and principles of scientific inquiry and investigation.

For example:

- demonstrating knowledge of methods used for making observations and for formulating and expressing scientific questions or hypotheses to be investigated based on the observations
- identifying methods for conducting scientific investigations to address and explain questions or hypotheses
- identifying strategies for collecting, organizing, analyzing, and displaying scientific data
- demonstrating knowledge of systems of measurement used in science
- identifying strategies for summarizing and analyzing scientific information, including possible sources of error, and suggesting reasonable and accurate interpretations and implications

0033 Understand the relationships among science, technology, and society.

For example:

- analyzing the effects of science and technology on society
- analyzing the influence of society on science and technology
- identifying the advantages and risks of scientific and technological changes
- identifying career opportunities in the fields of science and technology

0034 Understand the nature and history of science.

For example:

- recognizing the history of important scientific ideas and the contributions of various cultures and individuals to scientific knowledge
- recognizing unifying concepts of science (e.g., systems, equilibrium)
- identifying inherent values of science (e.g., using logical arguments, avoiding researcher bias, acknowledging paradigm shifts)
- recognizing the process and importance of peer review of scientific findings

HEALTH AND PHYSICAL EDUCATION

0035 Understand basic principles and practices related to personal and community health and safety.

For example:

- recognizing basic processes of human growth, development, and body systems
- identifying strategies for maintaining personal mental and physical health (e.g., hygiene, sleep, exercise, nutrition)
- recognizing the role culture plays in mental and physical well being
- recognizing common health issues of children, the signs and symptoms of health problems (e.g., allergies, asthma, conjunctivitis, pediculosis), and how they can be prevented or treated
- recognizing the influence of various factors on personal and community health and safety
- recognizing the importance of positive interventions (e.g., community involvement, nonviolent conflict resolution) on personal and community health and safety

0036 Understand basic principles and practices related to lifetime physical fitness.

For example:

- identifying components of fitness (e.g., cardiovascular endurance, flexibility, coordination)
- identifying activities that promote lifetime physical fitness
- recognizing ways to prevent or lower the risk of disease
- recognizing the influence of media on health choices, body image, and self-confidence
- recognizing consequences of substance use and abuse
- identifying strategies for promoting students' ability to use skills that contribute to good health (e.g., problem solving, decision making, locating and evaluating information about health services)

0037 Understand basic principles and practices of physical education.

For example:

- identifying basic locomotor patterns (e.g., run, gallop, slide, horizontal jump, hop, leap, skip, starting and stopping)
- recognizing principles of training, conditioning, and practicing for specific physical activities (e.g., swimming, running)
- identifying safety practices associated with physical activities
- recognizing appropriate rules and strategies for physical activities, cooperative and competitive games, and sports
- demonstrating knowledge of physical activities, games, and sports for individuals at various activity levels
- recognizing cross-cultural origins of physical activities, games, and sports