



TEST SUMMARY AND FRAMEWORK

TEST SUMMARY

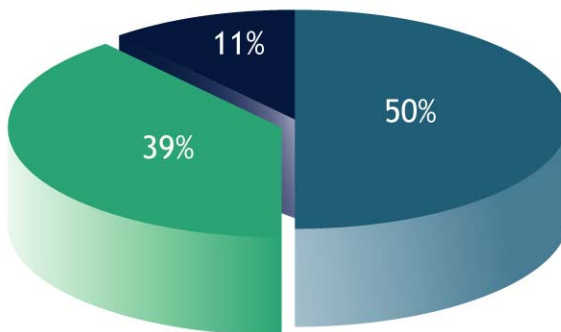
ELEMENTARY EDUCATION

The Washington Educator Skills Tests—Endorsements™ (WEST-E™) are designed to measure a candidate’s knowledge of the subject-area content contained in the test framework for each field. All WEST-E tests are fully aligned with the state’s teacher endorsement competencies and, as applicable, the Essential Academic Learning Requirements.

This test summary describes general testing information as well as the approximate percentage of the total test score derived from each content domain. The test framework, organized by content domain, contains the objectives that define the content for the test.

SUBTEST 1: MATHEMATICS, SCIENCE, HEALTH/FITNESS

Test Format	Multiple-choice questions
Number of Questions	Approximately 55
Test Session	75 minutes (1.25 hours)
Passing Score	240 (scores are calculated in a range from 100 to 300)
Test Code	005

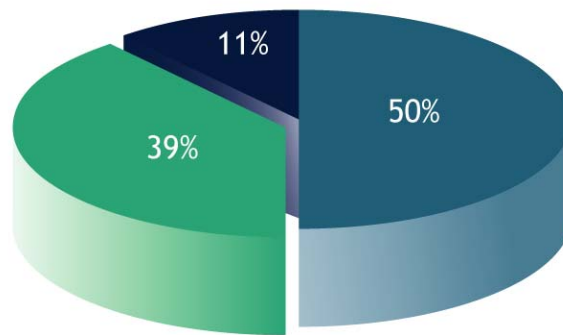


Key	Approximate Percentage of Subtest	Content Domain	Range of Objectives
50%	Mathematics	0001-0009	
39%	Science	0010-0016	
11%	Health/Fitness	0017-0018	



SUBTEST 2: ENGLISH LANGUAGE ARTS, SOCIAL STUDIES, THE ARTS

Test Format	Multiple-choice questions
Number of Questions	Approximately 55
Test Session	75 minutes (1.25 hours)
Passing Score	240 (scores are calculated in a range from 100 to 300)
Test Code	006



Key	Approximate Percentage of Subtest	Content Domain	Range of Objectives
■	50%	English Language Arts	0019-0027
■	39%	Social Studies	0028-0034
■	11%	The Arts	0035-0036



TEST FRAMEWORK

ELEMENTARY EDUCATION

MATHEMATICS

0001 Understand principles, concepts, and procedures related to mathematical representation and communication.

For example:

- extracting mathematical information from a variety of sources (e.g., pictures, diagrams, text, graphs)
- using textual, graphic, numeric, and symbolic representations to communicate mathematical concepts
- translating between textual, graphic, numeric, and symbolic representations
- using mathematical language to communicate ideas and information, including interpreting mathematical terminology, symbols, and representations

0002 Understand principles, concepts, and procedures related to mathematical reasoning, proof, and connections.

For example:

- applying knowledge of formal and informal mathematical reasoning processes (e.g., using logical reasoning to draw and justify conclusions)
- developing and evaluating conjectures and informal proofs
- recognizing and applying mathematics in real-world contexts and applying connections among mathematical ideas
- demonstrating knowledge of the historical development of mathematics, including contributions from many cultures



0003 Understand principles, concepts, and procedures related to mathematical problem solving and the use of technology.

For example:

- applying knowledge of appropriate mathematical concepts, procedures, tools, and technologies to solve problems
- making use of pictures, models, charts, graphs, and symbols as tools of mathematical problem solving
- applying, analyzing, and evaluating mathematical thinking and strategies
- recognizing the appropriate use of tools and technology to visualize mathematical concepts and to perform mathematical experiments and explore conjectures

0004 Understand principles, concepts, and procedures related to numbers, number sense, and numeration.

For example:

- demonstrating knowledge of the characteristics of whole numbers, integers, rational numbers, and real numbers
- identifying equivalent forms of fractions, decimals, percents, roots, and powers, including using scientific notation to represent small and large numbers
- comparing and ordering numbers
- applying fundamental concepts of number theory, including prime and composite numbers, place value, factors and multiples, and divisibility rules

0005 Understand principles, concepts, and procedures related to mathematical operations, calculation, and estimation.

For example:

- using a variety of models, methods, and algorithms to represent operations with integers and whole and rational numbers
- demonstrating knowledge of the properties of the rational number system (e.g., commutative, associative)
- identifying situations in which estimation is an appropriate problem-solving strategy
- making use of estimation to predict results and determine the reasonableness of answers
- solving problems involving integers, fractions, decimals, ratios, proportions, percents, powers, and roots using a variety of algorithms, procedures, and strategies, including mental math



0006 Apply principles, concepts, and procedures related to algebra.

For example:

- recognizing, representing, and extending patterns, relationships, and functions using numbers, graphs, symbols, variables, and rules
- simplifying and evaluating algebraic expressions and formulas, and solving algebraic equations and inequalities
- making use of algebraic functions to plot points and describe graphs, and analyzing change in various contexts
- translating word problems into mathematical terms using algebraic concepts such as variables and equations
- using mathematical models to represent quantitative relationships (e.g., proportional relationships, linear relationships)
- solving problems using a variety of algebraic concepts, models, and methods

0007 Apply principles, concepts, and procedures related to geometry.

For example:

- analyzing various representations (e.g., diagrams, perspective drawings, projections, nets) of two- and three-dimensional objects
- analyzing properties and relationships of various geometric shapes and structures
- applying core concepts and principles of Euclidean geometry (e.g., symmetry, similarity, congruence) in two and three dimensions (e.g., points, lines, planes) to solve problems
- applying knowledge of coordinate grids to represent basic geometric figures and analyze transformations

0008 Apply principles, concepts, and procedures related to measurement.

For example:

- identifying and measuring component parts (e.g., angles, lines, segments) and properties (e.g., area, volume) of geometric figures and recognizing the relationships between two- and three-dimensional figures
- demonstrating knowledge of the relationship of units within the U.S. and metric systems
- recognizing appropriate uses of standard measurement units, selecting appropriate measurement tools, measuring objects and events, and calculating rates and determining units
- applying knowledge of the concepts of precision, accuracy, and estimation



0009 Apply principles, concepts, and procedures related to statistics and probability.

For example:

- identifying various methods (e.g., surveys, tables, graphs) of systematically collecting, organizing, and displaying data
- applying knowledge of statistical methods and technological tools to analyze data and describe shape, spread, and center (e.g., mean, median, mode, range)
- making inferences based on analysis of experimental results, statistical data, and graphic representations
- applying knowledge of how statistics can be used to support different points of view and identifying misuses of statistics and invalid conclusions
- applying counting procedures to determine probabilities
- applying properties of dependent and independent events to calculate probabilities
- demonstrating knowledge of the use of tools (e.g., spinners, number cubes) and technology-based simulations to estimate probable outcomes

SCIENCE

0010 Understand matter and energy and their interaction in physical systems.

For example:

- identifying the physical and chemical properties of matter
- distinguishing physical and chemical changes in matter
- demonstrating knowledge of how energy is transformed from one form into another and methods of energy transfer (e.g., conduction, convection, radiation)
- recognizing properties, characteristics, and behaviors of sound, water, and light waves
- demonstrating knowledge of basic concepts related to electricity and magnetism
- comparing and contrasting characteristics of elements, atoms, molecules, mixtures, and compounds
- recognizing that energy and matter are conserved in chemical and physical systems



0011 Understand the interaction of force, mass, and motion in physical systems.

For example:

- applying knowledge of Newton's three laws of motion and solving problems involving the force, mass, and motion of objects in everyday phenomena
- analyzing graphs that represent the motion of objects in terms of distance, time, velocity, and acceleration
- identifying the kinds of forces (e.g., frictional, gravitational) that act on objects in everyday situations
- recognizing the role that the force of gravity plays in tides and the solar system
- demonstrating knowledge of the use of simple machines (i.e., lever, pulley, wedge, wheel and axle, screw) in everyday life and the mechanical advantage they provide

0012 Understand fundamental concepts and principles related to earth and space systems.

For example:

- demonstrating knowledge of the processes that change the surface of the earth (e.g., soil formation, weathering, erosion, volcanism, tectonic activity) and the causes and effects of those processes
- recognizing the characteristics and processes of the rock cycle and physical and chemical properties of earth materials
- recognizing how fossils and other evidence are used to document life and environmental changes over time
- recognizing the components, structure, and interconnections among the earth's crust, atmosphere, and hydrosphere
- demonstrating knowledge of the water cycle and weather patterns and factors that influence weather and climate
- demonstrating knowledge of the structure of the solar system and of the characteristics, interactions, and motions of its components
- demonstrating knowledge of renewable and nonrenewable resources and of the effects of human activities on the environment



0013 Understand fundamental concepts and principles of life science and living systems.

For example:

- recognizing basic structures and functions of cells
- recognizing the characteristics, processes, and classification of living things
- demonstrating knowledge of the basic structures and functions of human body systems
- recognizing the processes by which organisms obtain matter and energy for life processes
- analyzing how organisms interact with one another and with their environment, including the effects of human activities on the environment
- demonstrating knowledge of characteristics of the life cycles of common plants and animals
- recognizing the principles of the transmission of genetic information and of biological evolution

0014 Understand the nature, skills, and processes of scientific inquiry.

For example:

- recognizing the nature of scientific inquiry, including how scientific theories explain facts using inferential logic and the role of curiosity, honesty, skepticism, observation, and openness in the scientific process
- identifying controlled, manipulated (i.e., independent), and responding (i.e., dependent) variables in scientific investigations
- demonstrating knowledge of the skills and processes of scientific inquiry, including planning scientific investigations, collecting and presenting data in different contexts, and drawing conclusions from data and evidence
- recognizing appropriate procedures for making scientific investigations reliable and valid
- recognizing potential safety hazards, sources of information, and appropriate protocols for maintaining safety and responding to emergencies in laboratory situations
- demonstrating knowledge of appropriate tools, equipment, and procedures to collect, record, measure, and represent data in scientific investigations



0015 Understand problem-solving strategies and mathematical thinking used in scientific investigations.

For example:

- recognizing appropriate use of charts, tables, and graphs for data display and analysis in different contexts
- applying basic mathematical procedures (e.g., averaging, estimating, using ratios and proportions) to interpret scientific data
- recognizing the appropriate use of fractions, percents, and decimals to represent data
- recognizing how physical models (e.g., relating electric current to flowing water, using a globe and lamp to demonstrate changing seasons) and computer simulations (e.g., weather forecasting, earthquake analysis) are used to explain systems and processes
- demonstrating knowledge of the appropriate metric units and levels of precision used in scientific investigations

0016 Understand the historical development of science and the interconnections among science, technology, and society.

For example:

- recognizing the contributions of individuals from diverse cultures to the development of science and technology
- analyzing how science and technology have affected individuals, cultures, and societies throughout history
- demonstrating knowledge of how science and technology are used to develop solutions to economic, societal, and environmental problems
- recognizing the integration and interdependence of science, technology, society, the workplace, and the environment



HEALTH/FITNESS

0017 Understand typical factors, principles, and practices related to the development of personal health and safety.

For example:

- recognizing patterns and stages of child growth and development and factors that affect growth and development, including the ways in which health and fitness choices and habits affect quality of life, health, and life span
- demonstrating knowledge of nutritional principles and the influence of nutritional practices on health and development
- identifying principles, practices, and skills for maintaining personal health and safety and for reducing health risks (e.g., using health-care products safely, recognizing risky situations, demonstrating injury-prevention techniques)
- applying knowledge of how to use social skills to respond to peer pressure, to express opinions and resolve conflicts constructively, and to maintain safe and respectful relationships
- identifying types and effects of stress, factors that affect family life and mental and emotional health, and strategies for managing stress and for maintaining healthy family relationships and positive mental, emotional, physical, and sexual health
- recognizing the physical, emotional, and legal consequences of using alcohol, tobacco, and other drugs, and identifying techniques and strategies for resisting pressures and unhealthy messages related to drug use
- demonstrating knowledge of practices and skills that prevent and reduce the risk of contracting and transmitting communicable diseases and that help prevent and control noncommunicable diseases



0018 Demonstrate knowledge of basic movement concepts, motor skills, rhythmic activities, fitness activities, and games and sports.

For example:

- demonstrating knowledge of movement concepts related to body awareness, spatial awareness, and direction, and of the ways in which children grow and develop kinesthetically
- recognizing types and elements of basic motor skills (e.g., locomotor, non-locomotor, manipulative) and techniques, cues, and prompts for developing fundamental and specialized motor skills (e.g., run, throw, kick)
- demonstrating knowledge of appropriate strategies, activities, games, and sports for various purposes and for various developmental, age, and ability levels
- recognizing appropriate principles, techniques, cues, prompts, and feedback for promoting skill development and safe participation in rhythmic activities, games, and sports
- demonstrating knowledge of physical fitness principles and activities for developing healthy levels of cardiorespiratory fitness, muscular strength and endurance, flexibility, and body composition
- recognizing the health-related benefits of movement and fitness activities and the role of physical activities in promoting social skills such as cooperation, support, respect, inclusion, and understanding and appreciation of similarities and differences

ENGLISH LANGUAGE ARTS

0019 Understand the nature of first- and second-language acquisition and development.

For example:

- demonstrating knowledge of the grammar of Standard American English, including semantics, syntax, morphology, and phonology
- recognizing the interrelationship between first- and second-language acquisition and literacy
- identifying examples of diversity in language use (e.g., grammar, patterns, dialects)
- recognizing ways in which linguistic and rhetorical patterns affect written and oral expression
- identifying skills that promote respectful communication and factors that affect intercultural communication



0020 Understand the developmental processes of reading and reading comprehension.

For example:

- recognizing concepts of print (e.g., holding a book, directionality, tracking of print)
- demonstrating knowledge of phonemic awareness and its importance to reading development
- demonstrating knowledge of the basic principles of phonics
- identifying strategies for monitoring and facilitating comprehension before, during, and after reading
- recognizing the components of reading fluency, factors that affect fluency, and the relationship between fluency and reading comprehension
- recognizing ways in which speaking, listening, spelling, and writing are essential components of reading development

0021 Understand word recognition skills and the development of vocabulary skills and knowledge.

For example:

- identifying decoding and word identification strategies, including the use of structural analysis, spelling patterns, and syllabication
- recognizing methods of direct and indirect vocabulary instruction (e.g., specific word instruction, context clues)
- recognizing ways to help students identify and use references (e.g., dictionary, thesaurus) for various purposes
- demonstrating an understanding of how prior knowledge, context clues, and graphic features of text can be used to predict, clarify, and expand word meanings

0022 Understand strategies for comprehending informational/expository and persuasive texts.

For example:

- identifying characteristics of informational/expository and persuasive writing
- demonstrating knowledge of strategies for analyzing, interpreting, and evaluating a variety of informational/expository and persuasive texts
- recognizing how tone, bias, and point of view influence meaning in informational/expository and persuasive texts
- recognizing how to apply comprehension strategies before, during, and after reading to promote understanding of informational/expository and persuasive texts



0023 Understand strategies for comprehending literary texts.

For example:

- recognizing authors of literature written for children and young adults and characteristics of their works
- identifying characteristics of genres and recognizing themes of literature written for children and young adults
- analyzing story elements in works of fiction
- recognizing literary and narrative devices and historical contexts of literary works and analyzing their relationship to the meaning of the text
- analyzing a variety of literary texts, including how elements such as tone, style, and point of view influence meaning
- recognizing the structural elements and essential attributes of poetic forms (e.g., rhyme scheme, meter, stanza)

0024 Understand the process of writing.

For example:

- demonstrating knowledge of the developmental stages of emergent writing (e.g., scribbling, letter strings, inventive spelling)
- identifying strategies for generating topics and developing ideas and for using organizational structures in writing
- identifying strategies for prewriting, drafting, revising, editing, proofreading, and publishing materials
- analyzing and identifying revisions of written work in relation to organization, unity, clarity, and style
- recognizing factors to consider when writing for various audiences and purposes
- demonstrating knowledge of how form (e.g., research paper, editorial, memoir) and mode (e.g., expository, persuasive, narrative) shape writing

0025 Apply knowledge of grammar, usage, and mechanics.

For example:

- applying knowledge of grammar and punctuation conventions for Standard American English
- applying knowledge of orthographic patterns and usage rules for Standard American English
- recognizing a variety of sentence structures and their uses
- recognizing a variety of paragraph formats and their uses



0026 Understand the interrelationships among reading, writing, speaking, listening, viewing, and thinking.

For example:

- demonstrating knowledge of the role of metacognition in reading and writing and in listening and speaking
- analyzing ways in which the integration of reading, writing, speaking, listening, viewing, and thinking is necessary for constructing knowledge and communicating effectively
- recognizing how features of spoken language and nonverbal cues affect communication
- identifying strategies for planning, organizing, delivering, and evaluating oral presentations for a variety of audiences and purposes
- analyzing the influence of media on culture and on people's actions and communications

0027 Understand inquiry and research methods in language arts.

For example:

- identifying strategies for locating information from a variety of sources (e.g., table of contents, indexes, newspaper, the Internet)
- demonstrating knowledge of appropriate source citations for bibliographies, footnotes, and endnotes
- identifying effective note-taking strategies
- demonstrating knowledge of the appropriate use of quotations as well as methods for summarizing and paraphrasing source information
- identifying methods for formulating research topics and essential questions



SOCIAL STUDIES

0028 Demonstrate knowledge of concepts related to citizenship and government.

For example:

- recognizing basic purposes and concepts of government and laws, the organization of federal, state, and local government in the United States, and how stakeholders influence public policy
- demonstrating knowledge of the core values and democratic principles of the United States as set forth in foundational documents, including the Constitution and the Declaration of Independence, and of key ideals of U.S. democracy
- demonstrating knowledge of the principles of democratic civic involvement and the roles, rights, and responsibilities of citizenship at the federal, state, local, and neighborhood levels
- demonstrating knowledge of the political organization of the world, characteristics of past and present forms of government, and factors that affect international relationships and the development of foreign policy

0029 Demonstrate knowledge of economic concepts and systems.

For example:

- recognizing basic terminology and concepts related to economics
- recognizing characteristics of economic systems and that economic choices involve costs and consequences
- demonstrating knowledge of the purposes and functions of currency and financial institutions and the role of government as participant in the economy through taxation, spending, and policy
- demonstrating knowledge of the economic issues that all societies face

0030 Understand major principles, concepts, and phenomena of geography.

For example:

- demonstrating knowledge of major geographic concepts and themes
- recognizing major geographic features of the United States and the world and their historical and contemporary significance
- deriving information from maps, charts, and other geographic tools
- demonstrating knowledge of settlement patterns around the world and the natural processes and human activities that create them
- analyzing the cultural and physical characteristics that define specific areas as regions



0031 Understand major forms of interaction between people, environments, and cultures.

For example:

- recognizing basic concepts related to the structure and organization of human societies
- recognizing basic concepts related to the transmission and diffusion of culture, interactions among cultures, and the global interdependence of societies
- analyzing the nature and implications of the effects of human activities on the environment
- analyzing the nature and implications of the effects of the environment and environmental changes on people

0032 Understand major concepts, issues, people, events, and developments in the history of the United States.

For example:

- identifying and comparing the characteristics and interactions of cultures during different periods of U.S. history
- demonstrating knowledge of major issues, people, events, and cause-and-effect relationships during different periods of U.S. history, their influence on the present, and how they affect planning for the future
- analyzing various perspectives and interpretations of issues and events in the history of the United States
- recognizing the influence of individuals, movements, culture, cultural groups, ideas, and technology on history and social change in the United States

0033 Understand major concepts, issues, people, events, and developments in world history.

For example:

- recognizing ways in which historical events are organized into time periods and eras, the chronological relationships within those periods and eras, and the ways in which different cultures perceive and record the passage of time
- demonstrating knowledge of early civilizations and cultures and their lasting influence
- demonstrating knowledge of major issues, people, events, and cause-and-effect relationships in historical periods of the world, their influence on the present, and how they affect planning for the future
- recognizing the causes and consequences of major world conflicts
- analyzing various perspectives and interpretations of issues and events in world history
- recognizing the influence of individuals, movements, culture, cultural groups, ideas, and technology on history and social change in the world



0034 Understand inquiry and information skills in social studies.

For example:

- demonstrating knowledge of strategies for locating information from a variety of social studies resources and of creating graphic representations of textual information
- identifying time, place, audience, purpose, and form of a source and distinguishing between primary and secondary sources
- recognizing stereotypes, clichés, bias, and propaganda techniques and distinguishing between fact and opinion
- demonstrating knowledge of strategies for evaluating the accuracy and reliability of information, including identifying the message and target audience of narrative documents

THE ARTS

0035 Understand the concepts, techniques, materials, functions, methods, and processes of music and the visual arts.

For example:

- demonstrating knowledge of basic elements, techniques, concepts, skills, and foundations in music and basic elements, principles of design, concepts, and skills in the visual arts
- recognizing types and characteristics of musical instruments, including the human voice, and methods, processes, and philosophies of creating music
- recognizing types and characteristics of materials, tools, techniques, methods, and processes used to create a variety of visual arts (e.g., painting, drawing, sculpting)
- recognizing methods and processes of creating, performing, and responding to music and to the visual arts
- demonstrating knowledge of how music and the visual arts are used to communicate and to express ideas and feelings for specific purposes and of how aesthetic and cultural diversity are reflected in music and in the visual arts
- recognizing vocal and instrumental musical styles and visual arts styles and achievements from various artists, cultures, and periods of history and how music and the visual arts shape and reflect culture and history
- demonstrating knowledge of how music and the visual arts make connections within and across the arts and to other disciplines, life, cultures, and work



0036 Understand the concepts, techniques, materials, methods, and processes related to dance and theatre.

For example:

- demonstrating knowledge of basic elements, techniques, and principles of composition in dance
- demonstrating knowledge of basic concepts, skills, foundations, and techniques in theatre
- demonstrating knowledge of dance forms (e.g., ballet, folk, modern) and their characteristic forms of movement, expressive qualities, and cultural origins
- demonstrating knowledge of dramatic and theatrical forms and their characteristics (e.g., pantomime, improvisation)
- recognizing methods and processes of creating, performing, and responding to dance and theatre
- demonstrating knowledge of how dance and theatre are used to communicate and to express ideas and feelings for specific purposes and of how aesthetic and cultural diversity are reflected in dance and theatre
- recognizing dance and theatre styles and achievements from various artists, cultures, and periods of history and how dance and theatre shape and reflect culture and history
- demonstrating knowledge of how dance and theatre make connections within and across the arts and to other disciplines, life, cultures, and work