



TEST DESIGN AND FRAMEWORK

TEST DESIGN

Early Childhood Education

The **Early Childhood Education** assessment consists of **two tests**. Each test contains a section with selected-response questions and a section with constructed-response assignments. Each section counts for a percentage of your total test score. The areas of content assessed by each test, the approximate number of selected-response questions and constructed-response assignments in each content area, and the percentage of your total test score derived from each test section are shown in the tables below. Further information regarding the content included in each subarea can be found in the test framework.

■ Test I (Test Code 001)

Subareas:	Objectives	Approximate Number of Selected-Response Questions	Constructed-Response Assignments
➤ Reading and English Language Arts	0001–0008	40	1
➤ Social Studies	0009–0012	20	1
TOTAL		60	2
Percentage of Test Score		80%	20%

■ Test II (Test Code 002)

Subareas:	Objectives	Approximate Number of Selected-Response Questions	Constructed-Response Assignments
➤ Mathematics	0013–0017	25	1
➤ Science	0018–0021	20	1
➤ Health, Physical Education, and the Arts	0022–0024	15	
TOTAL		60	2
Percentage of Test Score		80%	20%



Georgia Assessments for the
Certification of Educators®

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TEST FRAMEWORK

Early Childhood Education

READING AND ENGLISH LANGUAGE ARTS

0001 Understand concepts of print and phonological awareness.

For example:

- recognizing developmental stages in learning to write and read
- demonstrating knowledge of characteristics and purposes of printed information and developmentally appropriate strategies for promoting students' familiarity with concepts of print
- demonstrating knowledge of phonological awareness (i.e., awareness that oral language includes units such as spoken words and syllables)
- demonstrating knowledge of phonemic awareness (i.e., ability to perceive and discriminate among the component sounds in a spoken word)
- analyzing the significance of phonological and phonemic awareness in reading acquisition
- recognizing developmentally appropriate strategies for promoting students' phonological and phonemic awareness (e.g., identifying rhyming words, segmenting words, blending phonemes)

0002 Understand word identification strategies, including phonics.

For example:

- recognizing how beginning writers and readers learn to apply knowledge of the relationship between letters and letter combinations of written words and the sounds of spoken words
- demonstrating knowledge of phonics skills and their application to decoding unfamiliar words
- applying knowledge of structural analysis as a word identification strategy (e.g., identifying prefixes, suffixes, and roots)
- demonstrating knowledge of the use of spelling patterns and syllabication as techniques for decoding unfamiliar words
- applying knowledge of developmentally appropriate instruction and curriculum materials for promoting students' decoding skills and word identification strategies



0003 Understand the development of vocabulary knowledge and skills across the curriculum.

For example:

- recognizing criteria for selecting appropriate words to increase students' vocabulary knowledge (e.g., synonyms, antonyms, words with multiple meanings, idioms, classifications)
- demonstrating knowledge of developmentally appropriate strategies for promoting and reinforcing students' oral and written vocabulary knowledge
- applying knowledge of how context is used to determine the meaning of unfamiliar words
- recognizing ways to help students identify and use references such as dictionaries and thesauri for various purposes (e.g., determining word meanings and pronunciations, finding alternative word choices)

0004 Understand reading fluency and comprehension across the curriculum.

For example:

- demonstrating knowledge of the concepts of rate, accuracy, expression, and phrasing in reading fluency and recognizing factors that affect fluency
- analyzing the relationship between reading fluency and comprehension
- recognizing the effects of various factors (e.g., prior knowledge, context, vocabulary knowledge, graphic cues) on reading comprehension
- distinguishing among literal, inferential, and evaluative comprehension
- identifying strategies for promoting students' literal, inferential, and evaluative comprehension
- applying knowledge of strategies (e.g., predicting, rereading, retelling) that facilitate comprehension before, during, and after reading

0005 Understand comprehension strategies for literary and informational texts across the curriculum.

For example:

- recognizing types and characteristics of literary and informational texts
- identifying characteristics and functions of literary elements and devices (e.g., plot, point of view, setting)
- applying strategies for developing students' literary response skills (e.g., making connections between texts and personal experiences)
- demonstrating knowledge of genres, themes, authors, and works of literature written for children
- recognizing common patterns of organization in informational texts (e.g., chronological, cause-and-effect)
- applying knowledge of strategies for promoting comprehension of informational texts (e.g., identifying the main idea and explicit and implicit supporting details, using a glossary, using a graphic organizer)

0006 Understand skills and strategies involved in writing for various purposes across the curriculum.

For example:

- recognizing developmental stages of writing, including the use of pictures and developmental spelling
- analyzing factors to consider in writing for various audiences and purposes and in writing materials in various genres, formats (e.g., essay, poem), and modes (e.g., descriptive, persuasive, evaluative)
- demonstrating knowledge of the writing process (e.g., prewriting, drafting, revising, editing) and strategies for promoting students' writing skills
- demonstrating knowledge of the use of writing strategies and language to achieve various effects (e.g., creating a point of view, showing author's voice, persuading, establishing setting, describing sensory details)
- applying revision strategies to improve the unity, organization, clarity, precision, and effectiveness of written materials
- demonstrating knowledge of the use of research skills and computer technology to support writing

0007 Understand the conventions of standard English grammar, usage, and mechanics.

For example:

- demonstrating knowledge of the parts of speech
- demonstrating knowledge of elements of appropriate grammar and usage (e.g., subject-verb agreement, noun-pronoun agreement, verb tense, correct pronoun usage in prepositional phrases)
- demonstrating knowledge of appropriate mechanics in writing (e.g., capitalization, punctuation)
- identifying appropriate corrections of errors in sentence structure (e.g., run-on sentences, misplaced modifiers, sentence fragments)
- demonstrating knowledge of various types of sentence structures (e.g., declarative, interrogative)

0008 Understand skills and strategies involved in speaking, listening, and viewing across the curriculum.

For example:

- applying knowledge of conventions of one-on-one and group verbal interactions (e.g., turn taking, responding to questions with appropriate information)
- analyzing ways in which verbal cues (e.g., word choice, tone, volume) and nonverbal cues (e.g., body language, eye contact) affect communication in various situations
- demonstrating knowledge of strategies for promoting effective listening skills
- recognizing types, characteristics, and roles of visual and oral media (e.g., television, radio, film, electronic media)
- demonstrating knowledge of the structures and elements of oral, visual, and multimedia presentations for diverse audiences and for various purposes



SOCIAL STUDIES

0009 Understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history.

For example:

- recognizing chronological relationships among historical events
- demonstrating knowledge of the importance and lasting influence of diverse people, events, issues, and developments in Georgia, U.S., and world history (e.g., slavery, roots of democracy, westward expansion, the Civil War, World Wars I and II, the Cold War, civil rights movement)
- demonstrating knowledge of early Native American cultures in North America and their interactions with early explorers
- analyzing various perspectives, interpretations, and implications of events, issues, and developments in Georgia, U.S., and world history
- demonstrating knowledge of strategies (e.g., formulating research questions) and resources for historical inquiry

0010 Understand major concepts, principles, and methods of inquiry related to geography.

For example:

- applying knowledge of basic concepts of geography (e.g., location, movement of people, interaction among peoples)
- demonstrating knowledge of major physical and human-constructed features of the earth
- analyzing interactions between physical systems and human systems (e.g., economic, cultural, political)
- applying knowledge of maps (e.g., political, physical, topographic, resource), globes, and other geographic tools (e.g., compass rose, legend, map scale)
- demonstrating knowledge of strategies (e.g., interpreting maps) and resources for geographic inquiry



0011 Understand major concepts, principles, and methods of inquiry related to U.S. government and civics.

For example:

- demonstrating knowledge of the functions of government and the basic principles of the U.S. government as a republic
- identifying the roles and interrelationships of national, state, and local governments in the United States
- recognizing the roles and powers of the executive, legislative, and judicial branches of government
- demonstrating knowledge of the Declaration of Independence, the U.S. Constitution, and the Bill of Rights
- identifying the rights and responsibilities of U.S. citizenship
- demonstrating knowledge of strategies and resources (e.g., Internet, mass communication) for inquiry related to government and civics

0012 Understand major concepts, principles, and methods of inquiry related to economics.

For example:

- recognizing basic economic concepts (e.g., scarcity, supply and demand, needs and wants, opportunity cost, productivity, trade) and the purposes and functions of currency
- demonstrating knowledge of the basic structure of the U.S. economy and ways in which the U.S. economy relates to and interacts with the economies of other nations
- recognizing the roles and interactions of consumers and producers in the U.S. economy
- identifying the functions of private business, banks, and the government in the U.S. economy
- identifying the knowledge and skills necessary to make reasoned and responsible financial decisions as a consumer, producer, saver, and borrower in a market economy
- demonstrating knowledge of strategies (e.g., interpreting graphs and tables) and resources for inquiry related to economics

MATHEMATICS

0013 Understand processes and approaches for exploring mathematics and solving problems.

For example:

- identifying effective strategies (e.g., determining relevant information, simplifying, estimating) for solving single-step and multistep problems in mathematical and other contexts
- demonstrating knowledge of strategies for investigating, developing, and evaluating mathematical arguments
- demonstrating knowledge of how the language and vocabulary of mathematics are used to communicate ideas precisely
- demonstrating knowledge of selecting, applying, and translating among a variety of materials, models, and methods, and of technologies used to explore mathematical concepts and solve problems
- demonstrating knowledge of the interconnections among mathematical concepts
- recognizing applications of mathematics in other content areas and in everyday life

0014 Understand concepts and skills related to numbers and mathematical operations.

For example:

- applying concepts of quantities, numbers, and numeration to compare, order, estimate, and round
- demonstrating knowledge of the concepts of place value, prime numbers, multiples, and factors
- recognizing equivalent forms of common fractions, decimal fractions, and percentages
- applying knowledge of the relationships among mathematical operations and strategies for using the basic four operations with variables and numbers
- demonstrating knowledge of properties of numbers and the number system (i.e., commutative, associative, distributive, identity, and property of zero)
- performing calculations with whole numbers, decimals, and fractions
- applying methods for making estimations and for evaluating the accuracy of estimated solutions

0015 Understand principles and skills of measurement and the concepts and properties of geometry.

For example:

- identifying appropriate measurement procedures, tools, and units (i.e., customary and metric) for problems involving length, perimeter, area, capacity, weight, time, and temperature
- applying knowledge of approaches to direct measurement through the use of standard and nonstandard units and indirect measurement through the use of algebra or geometry
- classifying plane and solid geometric figures (e.g., triangle, quadrilateral, sphere, cone)
- applying knowledge of basic geometric concepts (e.g., similarity, congruence, parallelism)
- applying strategies for measuring the component parts of geometric figures (e.g., angles, segments) and computing the volume of simple geometric solids
- applying knowledge of coordinate systems to identify representations of basic geometric figures and concepts
- demonstrating knowledge of applications of measurement and geometry in everyday life

0016 Understand concepts and skills related to algebra.

For example:

- recognizing the characteristics of patterns, identifying correct extensions of patterns, and recognizing relationships (e.g., color, shape, texture, number) among patterns
- applying knowledge of the concepts of variable, function, and equation to the expression of algebraic relationships
- identifying relationships among variables based on mathematical expressions, tables, graphs, and rules
- applying the methods of algebra to solve equations and inequalities
- analyzing how algebraic functions are used to plot points, describe graphs, and determine slope
- demonstrating knowledge of applications of algebra in representing relationships and patterns in everyday life

0017 Understand concepts and skills related to data analysis.

For example:

- applying knowledge of methods for organizing and interpreting data in a variety of formats (e.g., tables, frequency distributions, line graphs, circle graphs)
- identifying trends and patterns in data
- demonstrating knowledge of standard measures (i.e., mean, median, mode, and range) used to describe data
- drawing valid conclusions based on data
- demonstrating knowledge of applications of data analysis in everyday life

SCIENCE

0018 Understand the characteristics and processes of science.

For example:

- demonstrating knowledge of the nature of scientific knowledge and the values of science (e.g., importance of curiosity, honesty, openness, and skepticism; reliance on verifiable evidence)
- demonstrating knowledge of the principles of scientific inquiry and the design of scientific investigations
- recognizing and applying the unifying concepts of science (e.g., systems, models, scale)
- applying knowledge of strategies for observing, collecting, analyzing, and communicating scientific data (e.g., using graphs, charts, and tables)
- recognizing appropriate tools, instruments, methods, process skills, and safety procedures associated with given scientific investigations
- demonstrating knowledge of the connections among science, mathematics, technology, society, and everyday life

0019 Understand concepts and principles of earth science.

For example:

- comparing characteristics of objects in the solar system and universe (e.g., stars, planets) and analyzing the effects (e.g., seasons, phases of the moon) of the relative positions and motions of the earth, moon, and sun
- demonstrating knowledge of the composition, structure, and processes of the earth's lithosphere (e.g., rocks, minerals), hydrosphere, and atmosphere and the interactions among these systems (e.g., water cycle, weather patterns)
- applying knowledge of strategies and tools for observing, measuring, predicting, and communicating weather data
- recognizing the natural and human-caused constructive and destructive processes that shape the earth's surface
- demonstrating knowledge of how fossils are formed and how they provide evidence of organisms that lived long ago

0020 Understand concepts and principles of physical science.

For example:

- demonstrating knowledge of the structure and properties of matter (e.g., atoms, elements, molecules, density, boiling and freezing points)
- distinguishing between physical and chemical changes
- demonstrating knowledge of the concepts of conservation of matter and conservation of energy as they are applied to physical systems
- recognizing forms of energy (e.g., heat, light), processes of energy transfer, and the interactions of energy and matter
- demonstrating knowledge of types of forces (e.g., gravity, friction) and their effects on the position, motion, and behavior of objects
- identifying types and characteristics of simple machines (e.g., lever, pulley)
- recognizing characteristics of light, sound, electricity, and magnetism

0021 Understand concepts and principles of life science.

For example:

- distinguishing between living and nonliving things
- demonstrating knowledge of different types of organisms and methods of classification
- demonstrating knowledge of the basic needs, characteristics, structures, and life processes of organisms
- applying knowledge of the basic principles of heredity and life cycles
- demonstrating knowledge of the interactions of organisms with one another and their environment and the flow of energy and matter within an ecosystem
- analyzing the effects of humans on the environment
- demonstrating knowledge of factors that affect the survival or extinction of organisms

HEALTH, PHYSICAL EDUCATION, AND THE ARTS

0022 Understand basic principles and practices related to health and safety.

For example:

- demonstrating knowledge of the primary functions of the human body systems, the processes of human growth and development, and the basic principles of human nutrition
- recognizing the differences between communicable and noncommunicable diseases and strategies for preventing or treating them (e.g., vaccinations, hand washing, regular exercise, antibiotics)
- recognizing characteristics of interpersonal relationships (e.g., within families, among peers) and strategies for maintaining healthy interpersonal relationships (e.g., using conflict resolution and positive character development skills)
- identifying strategies for maintaining personal emotional and physical health (e.g., stress management, sleep, proper diet)
- recognizing the effects of substance abuse, factors contributing to substance abuse (e.g., media advertising, peer pressure), and strategies for resisting pressure to use alcohol, tobacco products, and other drugs
- identifying safety practices to avoid accidents and injuries

0023 Understand basic physical education principles, practices, and activities.

For example:

- identifying the components of health-related fitness (e.g., cardiovascular endurance, muscular strength, flexibility) and appropriate activities for promoting each of the different components
- demonstrating knowledge of activities that promote the development of locomotor, nonlocomotor, manipulative, and perceptual awareness skills in children
- applying knowledge of basic rules and strategies for developmentally appropriate physical activities, cooperative and competitive games, and sports
- recognizing the role that participation in physical activities can play in promoting positive personal and social behaviors



0024 Understand basic elements, concepts, and techniques associated with the arts.

For example:

- identifying the basic elements, concepts, and terms associated with dance, music, drama, and the visual arts (e.g., pathways, rhythm, plot, perspective)
- recognizing the basic techniques, processes, tools, and materials for creating, performing, and producing works in the various arts
- applying knowledge of diverse strategies for promoting critical analysis, cultural perspectives, and aesthetic understandings of the arts
- recognizing how the arts can be used as a form of communication, self-expression, and social expression
- demonstrating knowledge of the connections among the arts as well as between the arts and other areas of the curriculum and everyday life
- recognizing the role and function of the arts in various cultures and throughout history