



TEST DESIGN AND FRAMEWORK

TEST DESIGN

Special Education Academic Content Concentrations

The **Special Education Academic Content Concentrations** 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 087)

Subareas:	Objectives	Approximate Number of Selected-Response Questions	Constructed-Response Assignments
➤ Reading and English Language Arts	0001–0007	38	1
➤ Social Studies	0008–0011	22	1
	TOTAL	60	2
	Percentage of Test Score	80%	20%

■ Test II (Test Code 088)

Subareas:	Objectives	Approximate Number of Selected-Response Questions	Constructed-Response Assignments
➤ Mathematics	0012–0016	33	1
➤ Science	0017–0020	27	1
	TOTAL	60	2
	Percentage of Test Score	80%	20%



Georgia Assessments for the
Certification of Educators®

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TEST FRAMEWORK

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READING AND ENGLISH LANGUAGE ARTS

0001 Understand the foundations of reading and language.

For example:

- demonstrating knowledge of fundamental processes of language acquisition that relate to reading development
- recognizing the relationship between reading development and language development and between reading development and learning
- recognizing interrelationships among reading, writing, listening, speaking, and viewing
- demonstrating knowledge of the connections among reading and other areas of the curriculum
- recognizing the importance of using a variety of developmentally appropriate reading assessments that provide multiple indicators of student progress on an ongoing basis
- demonstrating familiarity with assessments used to determine students' independent, instructional, and frustration reading levels and recognizing the importance of using data from such assessments to select appropriate and readable materials for individuals and groups at all levels of reading proficiency
- recognizing the importance of using data from assessments to plan flexible groupings in instruction to address students' changing reading needs



0002 Understand fluency and other factors that affect reading comprehension.

For example:

- recognizing the role of oral reading fluency (e.g., reading rate, rhythm, flow) in facilitating comprehension and strategies for promoting students' oral reading fluency to support comprehension
- demonstrating knowledge of the role of phonics in developing rapid, automatic word recognition; the relationship between decoding and reading comprehension; and strategies for strengthening students' decoding skills
- recognizing the role of vocabulary knowledge in facilitating reading comprehension (e.g., familiarity with grade-level vocabulary, common idioms, figurative phrases) and strategies for preteaching vocabulary to support comprehension
- demonstrating knowledge of the relationship between students' oral language proficiency and their ability to comprehend text at the word level, the sentence level, and the paragraph level
- recognizing the role of prior knowledge in supporting fluent reading and reading comprehension and demonstrating knowledge of ways to activate students' prior knowledge and scaffold reading tasks to support comprehension
- recognizing how differences in students' cultural and linguistic backgrounds can affect their reading comprehension
- demonstrating knowledge of the use of miscue analyses to identify a reader's patterns of problem solving, self-monitoring, and self-correction

0003 Understand strategies for identifying words, developing vocabulary, and improving research habits and study skills.

For example:

- demonstrating knowledge of skills and strategies for determining and verifying the meaning of unfamiliar words (e.g., structural analysis, decoding, using context clues)
- demonstrating knowledge of strategies for determining and verifying meaning(s), pronunciation(s), synonyms, antonyms, and part(s) of speech of unfamiliar words or words with multiple meanings through the use of technology and other reference materials (e.g., dictionary, thesaurus)
- demonstrating knowledge of strategies and activities for promoting vocabulary development (e.g., word classification, semantic mapping, applying vocabulary words in new contexts)
- demonstrating knowledge of strategies for promoting students' ability to analyze how certain words and concepts relate to multiple subject areas
- demonstrating knowledge of strategies for teaching students how to vary reading strategies (e.g., skimming, scanning, rereading, in-depth reading) for different texts and purposes for reading and for improving students' comprehension of content-area texts (e.g., analyzing text structure, creating graphic organizers)
- demonstrating knowledge of strategies for promoting students' use of common textual features (e.g., paragraphs, topic sentences, glossary) and graphic features (e.g., photos, graphs, maps, captions) to locate, analyze, organize, and recall information
- demonstrating knowledge of strategies for promoting students' ability to locate, select, and use information from a variety of print, nonprint, and technological references and resources
- demonstrating knowledge of strategies for promoting various study skills (e.g., highlighting, note taking, outlining, test taking)

0004 Understand reading comprehension strategies for literary and informational texts.

For example:

- demonstrating knowledge of genres (e.g., myth, poetry, play), themes, authors, and works of literature written for children
- identifying characteristics and functions of literary elements and devices
- demonstrating knowledge of strategies for promoting students' comprehension of literary texts and their literary response skills
- analyzing common textual features and organizational patterns of informational texts
- analyzing the development of an author's argument, point of view, or perspective in a text
- distinguishing cause from effect and fact from opinion and drawing conclusions and inferences from information presented in a text
- demonstrating knowledge of methods and techniques for applying comprehension strategies (e.g., making predictions, self-monitoring, note taking, retelling, summarizing) before, during, and after reading



0005 Understand skills and techniques involved in writing for various purposes and audiences.

For example:

- recognizing how oral language supports writing
- identifying developmental stages of writing and spelling
- demonstrating knowledge of the writing process to develop, revise, and evaluate writing and strategies for promoting students' use of the writing process
- recognizing strategies for writing materials in a variety of genres
- applying revision strategies to improve unity, organization, clarity, precision, and effectiveness of written materials
- demonstrating knowledge of strategies (e.g., using rubrics) for promoting students' self-assessment of writing
- demonstrating knowledge of the use of research skills and computer technology to support writing

0006 Understand conventions of standard American English grammar, usage, mechanics, and spelling.

For example:

- demonstrating knowledge of parts of speech
- demonstrating knowledge of types and parts of sentences and the construction of sentences
- demonstrating knowledge of correct punctuation and capitalization
- applying knowledge of common spelling rules and patterns of standard American English



0007 Understand skills involved in listening, speaking, and viewing.

For example:

- recognizing the nature of communicative interactions in one-on-one and group settings
- demonstrating knowledge of ways in which verbal and nonverbal cues affect communication in various situations
- demonstrating knowledge of active listening and barriers to effective listening
- demonstrating knowledge of methods for determining a speaker's purpose and paraphrasing a speaker's point of view
- demonstrating knowledge of the structures and elements of oral, visual, and multimedia presentations
- recognizing types, characteristics, and roles of visual and/or oral media (e.g., radio, television, electronic media)
- interpreting ways in which visual images communicate information, influence attitudes, and change opinions and impressions
- demonstrating knowledge of strategies for promoting the use of listening and viewing to gather information from various forms of text and media and the use of speaking to share information, persuade others, and express ideas

SOCIAL STUDIES

0008 Understand major concepts and principles related to government, civics, and economics in the United States.

For example:

- applying knowledge of the functions of government and the basic principles of the U.S. government as a republic
- demonstrating knowledge of the roles and interrelationships of national, state, and local governments in the United States
- analyzing the roles and powers of the executive, legislative, and judicial branches of government
- recognizing the rights and responsibilities of U.S. citizenship
- demonstrating knowledge of the political process and the role of political parties in the United States
- recognizing the fundamental concepts and principles of economics and major features of the U.S. economic system
- demonstrating knowledge of the roles and interactions of consumers and producers in the U.S. economy
- demonstrating knowledge of the basic principles of personal money management



0009 Understand major concepts and principles related to geography.

For example:

- demonstrating knowledge of major geographic features of Georgia, the United States, Canada, and Latin America (e.g., the Andes Mountains, Hudson Bay)
- demonstrating knowledge of major geographic features of various regions of the world (e.g., Asia, Africa, Europe, the Middle East, Australia)
- demonstrating knowledge of basic concepts related to the structure and organization of human societies
- recognizing the diverse cultures of the United States, Canada, and Latin America and their differences in religion, customs, and traditions
- recognizing the effect of location, climate, natural resources, and population on the United States and the world
- recognizing the effect of human-environment interaction on the development of the United States, Canada, and Latin America (e.g., destruction of the rain forests in Brazil, acid rain in Canada)
- demonstrating knowledge of geographical tools and skills (e.g., maps, interpreting graphs) used to locate and derive information about people, places, and environments
- demonstrating knowledge of the interconnections among the geography, economics, government, and history of a region



0010 Understand major concepts and principles related to the history of the United States and Georgia.

For example:

- demonstrating knowledge of indigenous peoples in North America; the arrival of the Europeans; the differences and similarities between life in the New England, mid-Atlantic, and Southern colonies; and the major causes of the American Revolution
- demonstrating knowledge of territorial acquisitions (e.g., the Louisiana Purchase), the War of 1812, westward expansion, and technological developments (e.g., the telegraph) of the early nineteenth century
- demonstrating knowledge of the development of states' rights ideology and sectional conflicts, the emergence of slavery as a national issue, and the causes and events of the Civil War
- demonstrating knowledge of the Reconstruction period, the Indian wars, the growth of industry and big business, the rise of immigration, the new U.S. role in world affairs, and the origins of World War I
- recognizing major cultural developments (e.g., the Harlem Renaissance) of the 1920s, the Great Depression and the New Deal, the U.S. role in World War II, and the causes of the Cold War
- recognizing the U.S. role in the Korean and Vietnam wars, the civil rights movement, the environmental movement, the rise of conservatism, and the role of technology in U.S. society
- recognizing significant events in Georgia history, the influence of events elsewhere on Georgia history, and the role of Georgia in U.S. history

0011 Understand major concepts and principles related to the history of the various regions of the world.

For example:

- recognizing major historical developments and issues in Latin America and Canada (e.g., the Spanish mission system, the Quebec independence movement)
- recognizing major historical developments and issues in Europe since the Renaissance (e.g., the scientific revolution, the Industrial Revolution, the collapse of the Soviet Union)
- recognizing major historical developments and issues in Africa and the Middle East (e.g., apartheid in South Africa, major religions originating in the Middle East, the discovery and extraction of oil)
- recognizing major historical developments and issues in Asia, Australia, and Oceania (e.g., the division of India, the Chinese revolution, British colonization of Australia)
- recognizing major historical figures and their roles in world history (e.g., Mohandas Gandhi, Mao Zedong, Mikhail Gorbachev, Nelson Mandela)

MATHEMATICS

0012 Understand concepts and skills related to numbers and mathematical operations.

For example:

- analyzing the structure of number systems (e.g., number bases, place value)
- demonstrating knowledge of number theory and the characteristics of whole numbers (e.g., prime and composite numbers, prime factorizations, multiples, factors)
- identifying and analyzing a variety of models for representing numbers (e.g., fraction strips, diagrams, number lines)
- demonstrating knowledge of equivalency among different representations of numbers (e.g., fractions, decimals, percents, roots, scientific notation)
- comparing, ordering, and rounding different representations of numbers
- demonstrating knowledge of the relationships among mathematical operations and the properties of number operations (e.g., commutative, associative)
- applying knowledge of mathematical operations to problems involving fractions, decimals, and integers

0013 Understand principles and applications of measurement and geometry.

For example:

- identifying appropriate measurement procedures, tools, and units to solve a variety of measurement problems (e.g., involving length, area, volume, angles, weight, temperature, time, or rates of change)
- converting measurements within and between the customary and metric systems
- applying knowledge of similarity, scale factors, and proportional reasoning to solve measurement problems
- analyzing and applying properties of points, lines (e.g., parallel, perpendicular), planes, angles (e.g., complementary, supplementary), lengths, and distances (e.g., Pythagorean theorem)
- demonstrating knowledge of the properties of similarity and congruence
- analyzing and applying properties of plane and solid geometric figures (e.g., triangles, quadrilaterals, spheres, cones) to solve problems
- representing basic geometric figures in the coordinate plane
- identifying and applying concepts of symmetry and transformations (e.g., translations, rotations, reflections) to figures in the coordinate plane



0014 Understand concepts and skills related to algebra.

For example:

- analyzing, extending, and describing a variety of patterns (e.g., numerical, pictorial) using rules and algebraic expressions
- translating verbal descriptions into algebraic expressions that model problem situations
- applying the methods of algebra to solve equations and inequalities
- simplifying, evaluating, and performing operations (e.g., factoring, grouping) on polynomials and other algebraic expressions
- analyzing the relationship between a linear equation and its graph
- describing and using various representations (e.g., verbal, tabular, graphical, algebraic) of linear functions

0015 Understand concepts and skills related to data analysis and principles of probability.

For example:

- demonstrating knowledge of the nature of sampling, the collection of data through surveys, the significance of sample size, and random sampling
- applying knowledge of methods for organizing and interpreting data in a variety of formats (e.g., tables, frequency distributions, line graphs, circle graphs, histograms, box-and-whisker plots)
- determining and analyzing measures of central tendency (i.e., mean, median, mode) and dispersion (e.g., range, standard deviation)
- drawing valid conclusions based on data
- applying addition and multiplication counting principles to determine the number of outcomes related to an event
- determining probabilities of simple and compound events (e.g., dependent, independent, mutually exclusive, conditional)
- using different graphical representations (e.g., Venn diagrams, tree diagrams) to calculate and interpret probabilities

0016 Understand processes and approaches for exploring mathematics and solving problems.

For example:

- communicating mathematical ideas using a variety of representations (e.g., numeric, tabular, graphical, pictorial, symbolic)
- translating between various representations of mathematical ideas (e.g., algebraic, graphical, symbolic, diagrammatic) and everyday language
- identifying effective strategies (e.g., determining relevant information, simplifying, estimating) for solving problems in mathematical and other contexts
- demonstrating knowledge of strategies for evaluating the reasonableness of a solution to a problem
- recognizing connections among different concepts and areas of mathematics (e.g., algebra and geometry) and using them to solve problems
- applying correct mathematical reasoning to draw valid conclusions and evaluate mathematical arguments and proofs
- applying mathematical concepts and strategies across the curriculum and in everyday contexts to model and solve problems
- demonstrating knowledge of the analysis of problem-solving steps to determine areas of weakness or misunderstanding

SCIENCE

0017 Understand concepts and principles of earth science.

For example:

- recognizing and comparing characteristics of objects in the solar system and universe (e.g., stars, planets)
- describing the effects of the motions, orientations, and relative positions of the earth, moon, and sun (e.g., seasons, phases of the moon, tides)
- demonstrating knowledge of the structure, composition, and processes of the earth's geosphere (e.g., rock cycle, plate tectonics, soil formation)
- demonstrating knowledge of the structure, composition, and processes of the earth's hydrosphere (e.g., water cycle, ocean currents, waves)
- demonstrating knowledge of the structure and processes of the atmosphere and the characteristics of weather phenomena
- demonstrating knowledge of strategies and tools for observing, describing, and predicting weather
- identifying types, characteristics, and uses of renewable and nonrenewable resources and the effects of human activities on the earth's natural resources

0018 Understand the concepts and principles of physical science.

For example:

- demonstrating knowledge of the structure and properties of matter (e.g., atoms, molecules, density)
- distinguishing between physical and chemical changes in matter
- applying the concepts of conservation of energy and conservation of matter to physical systems
- demonstrating knowledge of different forms of energy (e.g., light, heat, sound) and the processes by which energy is transferred (i.e., conduction, radiation, convection)
- demonstrating knowledge of the effects of balanced and unbalanced forces on objects
- identifying types, characteristics, and uses of simple machines (e.g., pulleys, levers)
- recognizing the properties and characteristics of waves, sound, and light (e.g., propagation through different media, wavelength, reflection, refraction)
- demonstrating knowledge of the characteristics of electricity and magnetism and applications of electromagnetism (e.g., motors, generators, electromagnets)

0019 Understand the concepts and principles of life science.

For example:

- recognizing the characteristics of major groups of animals (e.g., amphibians, insects, birds, mammals) and plants (e.g., angiosperms, gymnosperms, ferns) and identifying criteria used to classify organisms
- demonstrating knowledge of the structure and organization of various types of organisms (e.g., plants, animals) and how they carry out basic life functions
- recognizing the structures and functions of cells in various types of organisms
- demonstrating knowledge of the structures and functions of the major organ systems in the human body
- demonstrating knowledge of the basic processes and principles of heredity and how biological traits are passed on to successive generations
- demonstrating knowledge of the evolution of living organisms through inherited characteristics that promote the survival of organisms and successive generations of their offspring
- demonstrating knowledge of characteristics of ecosystems and the dependence of organisms on one another



0020 Understand the characteristics, tools, 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 (e.g., devising hypotheses, determining what data to collect)
- recognizing appropriate tools, materials, instruments (e.g., graduated cylinder, triple-beam balance, microscope), methods, and safety procedures associated with given scientific investigations
- analyzing data by applying appropriate mathematical concepts and computational skills (e.g., using ratios, determining mean values)
- applying knowledge of strategies for analyzing and communicating scientific data (e.g., data tables, graphs)
- demonstrating familiarity with effective resources, technologies, and strategies for gaining information about science-related topics
- demonstrating knowledge of the criteria and strategies for evaluating scientific claims and arguments (e.g., expertise of the person making the claim, detecting flaws of reasoning)
- demonstrating knowledge of the unifying concepts of science and technology (e.g., systems, models, scale) and the connections of science to other subject areas and to everyday life