

Illinois Licensure Testing System

FIELD 163: SPECIAL EDUCATION GENERAL CURRICULUM TEST

TEST FRAMEWORK

May 2005

Subarea	Range of Objectives
I. Reading and Literacy	01–07
II. Mathematics	08–12
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Reading and Literacy
Mathematics
Natural Sciences
Social Sciences

SUBAREA I—READING AND LITERACY

0001 Understand the nature of the reading process and literacy development.

For example:

- Demonstrate knowledge of theoretical models of reading and philosophies of reading education and their relevance to instruction.
- Demonstrate knowledge of the factors that affect the development of reading proficiency.
- Identify characteristics of emergent literacy development and strategies for promoting the acquisition of these skills.
- Recognize the nature of cultural, linguistic, and ethnic diversity and how these characteristics and experiences can influence students as they learn to read.

0002 Understand word analysis skills and strategies.

For example:

- Demonstrate knowledge of phonemic awareness, concepts of print, and phonics and their roles in reading development.
- Demonstrate knowledge of structural analysis skills, including the use of base words, roots, prefixes, suffixes, and inflections.
- Demonstrate knowledge of the use of syllabication as a word identification strategy.
- Demonstrate knowledge of sight words and their use as a word identification strategy.
- Demonstrate knowledge of strategies for promoting the development of word analysis skills in individual students.

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0003 Understand vocabulary development.

For example:

- Demonstrate understanding of the relationship between oral and written vocabulary and reading comprehension.
- Demonstrate understanding of the development of vocabulary knowledge and skills in students with disabilities.
- Demonstrate understanding of the importance of frequent, extensive, varied reading experiences in vocabulary development.
- Identify strategies for promoting oral language development and listening comprehension (e.g., read-alouds).
- Identify strategies for teaching content-area vocabulary.

0004 Understand reading comprehension skills.

For example:

- Demonstrate knowledge of various reading comprehension strategies and study skills and factors that affect reading comprehension.
- Demonstrate knowledge of literal comprehension skills (e.g., recognizing facts and opinions, sequence of events, main ideas, or supporting details in a text).
- Demonstrate knowledge of inferential comprehension skills (e.g., summarizing; drawing conclusions; making generalizations from given information; drawing inferences about character, setting, or cause-and-effect relationships in an excerpt).
- Demonstrate knowledge of interpretive and evaluative comprehension skills (e.g., analyzing an author's purpose or point of view; evaluating the use of language or illustration to portray characters, develop plot, or elicit an emotional reaction).

0005 Understand the role of literature and other resources in instruction to promote literacy development.

For example:

- Demonstrate knowledge of literature for children and young adults.
- Identify characteristics of varied literary genres (e.g., folktale, myth, poetry, fiction).
- Identify various tools to estimate the readability of a text.
- Identify effective methods for locating, evaluating, and using literature to promote the literacy development of readers of all abilities and ages.
- Identify appropriate reading resources, materials, and technologies that can be used to support reading and writing instruction.

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0006 Understand methods for assessing literacy development and models of reading diagnosis.

For example:

- Identify effective strategies for assessing phonemic awareness, concepts of print, proficiency with print conventions, word recognition and analysis, and vocabulary skills.
- Identify effective strategies for assessing students' motivation and proficiency with reading fluency, comprehension, and self-monitoring.
- Identify effective strategies for determining students' reading levels (e.g., independent, instructional, frustrational).
- Recognize a variety of informal and formal assessments of reading, writing, spelling, and oral language and how they determine students' strengths and needs in these areas.
- Demonstrate knowledge of ways to gather and interpret information for diagnosing reading problems and measuring reading progress of individual students.

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0007 Understand processes for implementing reading instruction for students with learning difficulties related to literacy.

For example:

- Recognize effective ways to interpret and explain diagnostic information for families, general education teachers, and other specialists to use in planning instructional programs.
- Recognize a variety of individualized and group instructional interventions or programs for students who have difficulty reading and processes for designing, implementing, and evaluating appropriate reading programs for small groups and individuals.
- Identify strategies for planning and modeling the use of comprehension strategies across the content areas.
- Demonstrate knowledge of strategies for teaching reading skills applicable to real-life situations.
- Demonstrate knowledge of the scope and sequence and the design of lesson plans for reading instruction at all developmental levels.
- Identify effective ways to adjust reading instruction to meet the needs of diverse learners (e.g., gifted students, students for whom English is a second language, students with disabilities, and students who speak nonstandard dialects).
- Identify processes for developing instructional plans to address the unique needs of students with severe learning difficulties related to literacy.
- Demonstrate knowledge of ways to incorporate the Illinois Learning Standards in areas of reading in the development of instruction and Individualized Education Programs (IEPs).

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SUBAREA II—MATHEMATICS

0008 Understand fundamental concepts related to numbers, number sense, and numeration.

For example:

- Recognize ways to promote the development of number sense in children and factors that can affect the development of number sense.
- Apply knowledge of the properties of whole numbers and the whole number system and concepts of the number and numeration systems to compare, order, and round numbers.
- Demonstrate understanding of the order of operations.
- Apply knowledge of the concepts and skills related to using integers, fractions, decimals, ratios, and percents to solve problems.

0009 Understand fundamental concepts related to algebra and geometry.

For example:

- Recognize patterns in numbers, shapes, and data.
- Demonstrate knowledge of how to use variables, expressions, equations, and inequalities to describe patterns and express relationships algebraically.
- Recognize types of geometric figures in one, two, and three dimensions and their properties.
- Apply knowledge of the concepts and skills related to angles, perimeter, circumference, volume, symmetry, similarity, and congruence to solve problems.

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0010 Understand fundamental concepts related to measurement, statistics, and probability.

For example:

- Recognize appropriate measurement instruments, units, and procedures for various measurement problems involving length, area, time, temperature, and weight/mass.
- Apply knowledge of procedures for estimating and comparing measurements with the customary and metric systems and for using measurements to describe and compare phenomena.
- Apply knowledge of basic concepts and principles of statistics and probability (e.g., mean, median, mode, range).
- Identify various methods (e.g., surveys, tables, graphs) of systematically collecting, organizing, describing, and analyzing data.
- Apply knowledge of how to interpret graphic and nongraphic representations of statistical data (e.g., frequency distributions, percentiles).

0011 Understand ways of communicating and connecting mathematical concepts, procedures, and reasoning processes.

For example:

- Apply appropriate mathematical terminology in a variety of situations, including translation into everyday language.
- Identify ways to select and use a wide range of manipulatives, instructional resources, and technologies that support the learning of mathematics.
- Apply knowledge of strategies (e.g., estimation, mental mathematics, technologies) used to analyze mathematical ideas, solve problems, and investigate real-world situations.
- Apply knowledge of approaches for interpreting and communicating mathematical information, reasoning, concepts, applications, and procedures.

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0012 Understand concepts related to mathematics instruction that support the learning of students with disabilities.

For example:

- Recognize methods for evaluating general curricula and determining the scope and sequence of the academic content area of mathematics.
- Identify ways to incorporate the Illinois Learning Standards in the area of mathematics in the development of instruction and Individualized Education Programs (IEPs).
- Apply knowledge of how to develop appropriate lesson plans that incorporate curriculum and instructional strategies with individualized education goals and benchmarks.
- Demonstrate knowledge of ways to use resources and materials that are developmentally and functionally valid based on a student's needs.
- Recognize ways to apply principles of instruction for generalized math skills to teaching domestic, community, school, recreational, or vocational skills that require mathematics.
- Apply knowledge of ways to plan and to implement systematic instructional programs to teach individualized priority math skills.

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SUBAREA III—NATURAL SCIENCES

0013 Understand fundamental concepts and principles related to life and environmental science.

For example:

- Recognize basic processes and concepts related to cells and the characteristics, needs, and organization of living things.
- Recognize basic structures and functions of the human body in comparison with those of other organisms.
- Recognize processes by which energy and nutrients cycle through ecosystems.
- Analyze how organisms interact with one another and with their environment.
- Demonstrate knowledge of principles of genetics and evolutionary theory to understand how organisms change over time.
- Apply knowledge of principles and procedures (e.g., safety practices) related to the design and implementation of scientific investigations and processes to develop explanations of natural phenomena related to life and environmental science.
- Identify ways to develop lesson plans that incorporate life and environmental science curriculum, instructional strategies, and everyday applications into individualized education goals and benchmarks.
- Identify ways to incorporate the Illinois Learning Standards in the areas of life and environmental science in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning in life and environmental science.

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0014 Understand fundamental concepts and principles related to physical science.

For example:

- Recognize basic concepts related to matter and energy.
- Recognize the physical and chemical properties of matter.
- Demonstrate knowledge of characteristics of different forms of energy.
- Analyze the interactions of matter and energy in a system, including transfers and transformations of energy and changes in matter.
- Apply knowledge of principles and procedures (e.g., safety practices) related to the design and implementation of scientific investigations and processes to develop explanations of natural phenomena related to physical science.
- Identify ways to develop lesson plans that incorporate physical science curriculum, instructional strategies, and everyday applications into individualized education goals and benchmarks.
- Identify ways to incorporate the Illinois Learning Standards in the area of physical science in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning in physical science.

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0015 Understand fundamental concepts and principles related to Earth and space science.

For example:

- Demonstrate knowledge of the geological composition and history of the earth.
- Analyze the major features of the earth in terms of the natural processes that shape them.
- Demonstrate knowledge of the water cycle.
- Recognize fundamental weather processes and phenomena and the factors that influence them.
- Demonstrate knowledge of the basic components and structure of the solar system.
- Demonstrate knowledge of general principles and basic concepts of Earth and space science with regard to the composition, motions, and interactions of the objects in the universe.
- Apply knowledge of principles and procedures (e.g., safety practices) related to the design and implementation of scientific investigations and processes to develop explanations of natural phenomena related to Earth and space science.
- Identify ways to develop lesson plans that incorporate Earth and space science curriculum, instructional strategies, and everyday applications into individualized education goals and benchmarks.
- Identify ways to incorporate the Illinois Learning Standards in the areas of Earth and space science in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning in Earth and space science.

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SUBAREA IV—SOCIAL SCIENCES

0016 Understand fundamental concepts and principles related to government, politics, citizenship, civics, and economics.

For example:

- Recognize basic purposes and concepts of government, including the constitutional principles and democratic foundations of the U.S. government and basic principles of law in the Illinois and U.S. constitutional systems.
- Demonstrate knowledge of the basic structures and functions of federal, state, and local government in the United States and basic democratic principles, rights, values, and beliefs and their significance for individuals, groups, and society.
- Demonstrate knowledge of the political process and the role of political parties in the United States; responsibilities of U.S. citizens, including classroom, school, and community applications; the skills, knowledge, and attitudes necessary for successful participation in civic life; and strategies for modeling the rights and responsibilities of citizenship in a democratic society.
- Recognize fundamental concepts and principles of economics (e.g., supply and demand); key features of different economic systems (e.g., command, market, mixed); and major features of the U.S. economic system, including the role of consumers and producers and types of economic resources.
- Recognize key features and historical developments associated with different types of political systems; the interrelationships of economic and political systems; and their relationship to historical and contemporary developments in Illinois, the United States, and the world.
- Demonstrate knowledge of the relationships among government, politics, citizenship, civics, and economics and other social sciences and learning areas.
- Identify ways to develop lesson plans that incorporate government, politics, citizenship, civics, and economics curriculum and instructional strategies with individualized education goals and benchmarks.
- Demonstrate knowledge of ways to incorporate the Illinois Learning Standards in the areas of government, politics, citizenship, civics, and economics in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning related to government, politics, citizenship, civics, and economics.

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0017 Understand significant eras, themes, events, and cultural developments in the history of Illinois, the United States, and the world.

For example:

- Demonstrate knowledge of significant eras, themes, events, and people in the history of Illinois, the United States, and the world.
- Recognize ways in which cultural groups have affected and have been affected by U.S. society and ways in which cultural heritage and diversity have influenced historical developments in the United States.
- Analyze events, patterns, and relationships in Illinois, the United States, and the world as they relate to historical concepts and themes.
- Demonstrate knowledge of the relationships between history and other learning areas (e.g., the influence of the Renaissance on science).
- Identify ways to develop appropriate lesson plans that incorporate history curriculum and instructional strategies with individualized education goals and benchmarks.
- Demonstrate knowledge of ways to incorporate the Illinois Learning Standards in the area of history in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning related to the history of Illinois, the United States, and the world.

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0018 Understand fundamental principles and concepts related to geography.

For example:

- Demonstrate knowledge of major geographic features of Illinois, the United States, and the world and their historical and contemporary significance.
- Recognize how to use maps, globes, and other geographical tools to locate and derive information about people, places, and environments.
- Apply concepts of geography (e.g., location, movement, population, migration) to explain contemporary and historical issues and trends.
- Recognize the connections among and common concerns of world societies (e.g., food production and distribution, human rights).
- Recognize basic concepts related to the structure and organization of human societies and processes of socialization and social interaction.
- Demonstrate knowledge of the nature and implications of various types of interactions between people and the environment, including the effects of human activities (e.g., consumption of natural resources, pollution) on the environment.
- Identify ways to develop appropriate lesson plans that incorporate geography curriculum and instructional strategies with individualized education goals and benchmarks.
- Demonstrate knowledge of ways to incorporate the Illinois Learning Standards in the area of geography in the development of instruction and Individualized Education Programs (IEPs).
- Identify strategies for selecting and using a wide range of instructional resources, modes of inquiry, and technologies to support learning related to geography and the environment.