OHIO ASSESSMENTS FOR EDUCATORS (OAE)

FIELD 018/019: ELEMENTARY EDUCATION

ASSESSMENT FRAMEWORK

June 2013

Subtest I (Field 018)

Content Domain		Range of Competencies	Approximate Percentage of Subtest Score
I.	Reading and English Language Arts	0001–0005	62%
II.	Social Studies	0006–0008	38%

Subtest II (Field 019)

Content Domain		Range of Competencies	Approximate Percentage of Subtest Score
I.	Mathematics	0001–0004	50%
II.	Science	0005–0007	38%
III.	The Arts, Health, and Fitness	0008	12%

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SUBTEST I

READING AND ENGLISH LANGUAGE ARTS

0001 Understand foundations of language development and emergent literacy.

Includes:

1. Demonstrate knowledge of language development, including foundational concepts related to primary home- and English-language acquisition, factors affecting language development, the role of oral language development in emergent literacy, and the importance of building on students' current language skills to promote their language and literacy development.
2. Demonstrate knowledge of effective listening skills for a variety of purposes and audiences, and strategies for promoting development of students' listening skills to support their language and literacy development and their learning across the curriculum.
3. Demonstrate knowledge of phonological and phonemic awareness skills, the distinction between phonological and phonemic awareness, the role of phonological and phoneme awareness in emergent literacy, and strategies for developing students' phonological and phonemic awareness skills.
4. Demonstrate knowledge of concepts of print and the alphabetic principle and strategies for promoting students' development of concepts of print, letter knowledge, letter formation skills, and the knowledge of letter-sound correspondence.

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0002 Understand development of phonics, word analysis, spelling, and fluency.

Includes:

1. Demonstrate knowledge of the role of phonics and sight words in developing accurate, automatic word recognition and reading fluency and strategies for promoting development of phonics skills and sight words.
2. Demonstrate knowledge of the use of phonics patterns and word analysis strategies, including syllabication and morphology, as techniques for decoding multisyllable words.
3. Demonstrate knowledge of the reciprocity between decoding and encoding and strategies for promoting spelling development at all stages of reading development.
4. Demonstrate knowledge of reading fluency and strategies for promoting fluency development at all stages of reading development.
5. Demonstrate knowledge of strategies for promoting phonics, word analysis, spelling, and fluency skills for diverse learners.

0003 Understand reading comprehension and vocabulary skills.

Includes:

1. Recognize factors affecting reading comprehension.
2. Apply knowledge of literal, inferential, and evaluative comprehension skills.
3. Apply knowledge of strategies for promoting the reading comprehension skills of students who are at different stages of reading and for facilitating comprehension before, during, and after reading.
4. Demonstrate knowledge of the role of vocabulary development in reading and strategies for increasing students' vocabulary knowledge and their ability to apply vocabulary in new contexts.

0004 Understand literary, informational, persuasive, and functional texts, and graphic sources.

Includes:

1. Demonstrate knowledge of characteristics of various literary genres, elements of story structure, and literary devices and strategies for promoting students' comprehension and analysis of literary texts.
2. Recognize diverse genres of children's literature.
3. Demonstrate knowledge of the characteristics and features of various types of informational, persuasive, and functional texts, and strategies for promoting students' comprehension of various types of texts and analysis of text structures.
4. Demonstrate knowledge of the characteristics and features of various types of graphic sources, such as advertisements and editorial cartoons; how visual elements can be used to convey a particular message, meaning, or theme; and strategies for promoting students' comprehension and analysis of graphic sources.

0005 Understand the processes, conventions, and modes of written and oral communication.

Includes:

1. Apply knowledge of the processes, or steps, involved in developing a composition or oral presentation, including identifying an audience and purpose, generating and organizing ideas, evaluating the credibility and reliability of resources, revising and editing a draft, and incorporating aural or visual media or technology.
2. Demonstrate knowledge of the structure and key elements of various modes of communication, including intrapersonal, interpersonal, and academic modes.
3. Apply knowledge of conventions of Standard American English in written and oral communication, including correct spelling, capitalization, punctuation, grammar, and word usage.
4. Demonstrate knowledge of elements of effective writing and speaking, including appropriate language styles and registers and the use of nonverbal elements in speaking.

SOCIAL STUDIES

0006 Understand fundamental concepts related to government and economics.

Includes:

1. Recognize the basic structures, functions, and purposes of government, including the constitutional principles and democratic foundations of U.S. government.
2. Recognize the roles and powers of national, state, and local governments and of the executive, legislative, and judicial branches of government in the United States.
3. Demonstrate knowledge of the principles of democratic civic involvement and the practices, rights, and responsibilities of citizenship.
4. Demonstrate knowledge of the organization of politics in the world, characteristics of different forms of government, and factors that affect international relationships and foreign policy.
5. Recognize basic economic concepts and characteristics of economic systems, functions of currency, and the costs and consequences of economic choices.
6. Demonstrate knowledge of ways in which competition, markets, and prices influence the financial behavior of businesses, governments, and individuals.

0007 Understand fundamental concepts and major developments related to U.S. and world history.

Includes:

1. Demonstrate knowledge of significant eras, themes, people, and chronological relationships between events in U.S. and world history.
2. Recognize the geographic, social, political, scientific, technological, economic, and cultural characteristics of past civilizations.
3. Demonstrate knowledge of significant social, political, scientific, technological, economic, and cultural developments in U.S. and world history.
4. Recognize the causes and consequences of major U.S. and world conflicts.
5. Recognize how geographic, social, political, economic, and cultural processes have interacted to shape historical patterns of human population.
6. Demonstrate knowledge of historical analysis and interpretation, including differentiating between historical facts and historical interpretations, recognizing multiple perspectives, and recognizing the tentative nature of historical interpretations.

0008 Understand fundamental concepts related to geography and methods of social studies inquiry.

Includes:

1. Apply knowledge of major geographic concepts and themes.
2. Analyze the significant physical and human features of places and regions.
3. Analyze interactions between the environment and human societies.
4. Demonstrate knowledge of population trends, migration patterns, the characteristics of cultural groups, and networks of economic interdependence.
5. Demonstrate knowledge of how to use maps, charts, and other visual tools to locate, interpret, and convey social science information.
6. Demonstrate knowledge of the basic principles and procedures used in social science research.

SUBTEST II

MATHEMATICS

0001 Understand concepts of numeration, number sense, and mathematical operations.

Includes:

1. Demonstrate knowledge of properties of numbers and number systems, operations, place value, rounding, comparing and ordering numbers, and equivalent representations of numbers.
2. Use a variety of models to represent numbers and operations.
3. Demonstrate knowledge of prime and composite numbers, divisibility rules, least common multiple, and greatest common factor.
4. Solve problems involving integers, rational numbers, fractions, decimals, ratios, proportions, percent, exponents, and scientific notation.
5. Apply knowledge of basic concepts of probability, including the use of simulations and counting procedures to estimate probabilities.
6. Demonstrate knowledge of computation, including the use of mental math and estimation.

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0002 Understand mathematical reasoning and problem solving, communication and representation, and data analysis.

Includes:

1. Demonstrate knowledge of mathematical reasoning and proofs.
2. Apply knowledge of various strategies and procedures used in problem-solving situations.
3. Translate between verbal descriptions and mathematical language and symbols to express quantitative relationships and to solve problems.
4. Apply knowledge of a variety of diagrams, models, charts, manipulatives, and other tools used to represent mathematical concepts and real-world situations.
5. Apply knowledge of statistical measures (e.g., mean, median, mode, range, frequency distribution) to describe and analyze data.
6. Apply knowledge of data interpretation and of methods for displaying data in a variety of formats.

0003 Understand basic concepts of patterns, algebra, and functions.

Includes:

1. Recognize patterns in numbers, shapes, and data and ways to use variables, expressions, equations, and inequalities to communicate quantitative relationships.
2. Apply knowledge of patterns to model real-world situations and make predictions.
3. Recognize types and properties of functions.
4. Use algebraic concepts to solve equations and real-world problems.

0004 Understand basic concepts of geometry and measurement.

Includes:

1. Recognize types and properties of lines, angles, and two- and three-dimensional shapes, including symmetry, congruence, and similarity.
2. Solve problems involving perimeter, area, volume, geometric transformations, measurement, scale, and coordinate systems.
3. Use geometric concepts to solve real-world problems.
4. Identify and use appropriate measurement units, tools, and measurement techniques in various situations.
5. Convert measurements within the metric and customary systems.

SCIENCE

0005 Understand fundamental concepts of the life sciences.

Includes:

1. Apply knowledge of the characteristics and life processes of plants, animals, and other living organisms.
2. Demonstrate knowledge of the multiple ways in which organisms are ordered and classified and how species change over time.
3. Recognize the life cycles and reproductive patterns of common organisms and the application of basic principles of heredity to the transmission of traits from one generation to the next.
4. Analyze the interactions between organisms and their environment and the characteristics of and interactions between populations of organisms in an ecological community.

0006 Understand fundamental concepts of the physical, Earth, and space sciences.

Includes:

1. Demonstrate knowledge of the composition, structure, and properties of matter and the difference between physical and chemical changes in matter.
2. Recognize the effects of various types of forces on objects in given situations and the properties and uses of simple machines and tools.
3. Apply knowledge of the properties of light, sound, electricity, and magnetism.
4. Recognize forms of energy, energy sources, and processes of energy transfer and transformations.
5. Recognize types and characteristics of objects in the solar system and universe and the effects of the relative positions and motions of the sun, Earth, and moon.
6. Apply knowledge of the composition, structure, landforms, and processes of Earth's geologic system and how it interacts with other Earth systems.
7. Apply knowledge of the composition, structure, and processes of Earth's hydrologic and atmospheric systems, including weather and climate, and how these systems interact with each other and with Earth's geologic system.
8. Identify types and characteristics of renewable and nonrenewable natural resources, their uses, and their management.

0007 Understand the nature of science and the processes of scientific inquiry.

Includes:

1. Recognize the basic principles, goals, and values of science and how scientific knowledge develops and changes over time.
2. Recognize connections between and unifying themes among the life sciences, physical sciences, and Earth and space sciences, including the relationship between form and function, the nature of cycles and systems, the conservation of energy and matter, the use of models, and ways to organize and classify information.
3. Apply knowledge of the scientific method, including the design of scientific investigations, systematic observation, and controlled experimentation.
4. Apply knowledge of strategies for collecting, measuring, recording, summarizing, analyzing, and representing scientific data.
5. Analyze the relationships between science, mathematics, technology, and society.

THE ARTS, HEALTH, AND FITNESS

0008 Understand basic elements of the arts and fundamental concepts of health and fitness.

Includes:

1. Identify basic terms and elements associated with music, drama, dance, and the visual arts.
2. Recognize basic techniques, tools, and processes for creating and performing works in the various arts.
3. Demonstrate knowledge of the ways the arts can be used as a form of communication, self-expression, and social expression and the connections between the art disciplines, other disciplines, and everyday life.
4. Identify the basic structures and functions of the human body, common diseases and illnesses and how to prevent or treat them, and nutritional principles that influence health and development.
5. Apply knowledge of principles, practices, and skills for maintaining physical, mental, and emotional health and safety and for reducing health risks.
6. Identify the components of health-related fitness and appropriate activities to promote the development of locomotor, nonlocomotor, manipulative, and perceptual awareness skills in children.