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# **NEW YORK STATE TEACHER CERTIFICATION EXAMINATIONS™**

## **FIELDS 231/232/245: MULTI-SUBJECT: TEACHERS OF MIDDLE CHILDHOOD (GRADE 5–GRADE 9) ASSESSMENT DESIGN AND FRAMEWORK**

**October 2017**

**Authorized for Distribution by the New York State Education Department**

This assessment design and framework document is designed to provide information about the content and format of an assessment for the New York State Teacher Certification Examinations™ (NYSTCE®) program. Education faculty and administrators at teacher preparation institutions may also find the information in this framework useful as they discuss the test with candidates. All test components may differ from those presented here. Furthermore, review of this framework, in whole or in part, does not guarantee an increased likelihood of success on any of the New York State Teacher Certification Examinations. The NYSTCE program is subject to change at the sole discretion of the New York State Education Department, and any changes will fully supersede the information presented in this document. As a reminder, candidates are responsible for contacting their certification officer(s) regarding any changes to the New York State Teacher Certification Examinations.

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## NEW YORK STATE TEACHER CERTIFICATION EXAMINATIONS™

### FIELDS 231/232/245: MULTI-SUBJECT: TEACHERS OF MIDDLE CHILDHOOD (GRADE 5–GRADE 9)

#### ASSESSMENT DESIGN

This assessment consists of three parts, administered as three separate tests. Part One: Literacy and English Language Arts and Part Two: Mathematics are newly developed tests. Part Three: Arts and Sciences is a test using content from the previously administered Multi-Subject Content Specialty Test (CST) (field 002). In order to pass the overall assessment, candidates are required to achieve a score that meets or exceeds a separate performance standard for each part. Part Three is shared by all four Multi-Subject assessments; therefore, candidates seeking Multi-Subject certificates for more than one grade level need to pass Part Three only once.

Parts One and Two each consist of selected-response items and one extended constructed-response item. The constructed-response item, designed to measure candidates' pedagogical content knowledge, is scenario-based and requires an extended written response based on the analysis of multiple samples of student-based evidence. Part Three consists of selected-response items, only.

As indicated in the tables that follow, for Part One, the selected-response items count for 70% of the total test score and the constructed-response item counts for 30% of the total test score. For Part Two, the selected-response items count for 80% of the total test score and the constructed-response item counts for 20% of the total test score. Each selected-response item counts the same toward the total test score. The percentage of the total test score derived from the constructed-response item is also indicated in the tables that follow.

The total testing times are 120 minutes for Part One, 135 minutes for Part Two, and 60 minutes for Part Three. The following estimates were used to determine the total test time:

- Part One: The selected-response items are designed with the expectation of a response time of up to 60 minutes, and the constructed-response item is designed with the expectation of a response time of up to 60 minutes.
- Part Two: The selected-response items are designed with the expectation of a response time of up to 75 minutes, and the constructed-response item is designed with the expectation of a response time of up to 60 minutes.
- Part Three: The selected-response items are designed with the expectation of a response time of up to 60 minutes.

Further information regarding the content of each competency can be found in the assessment framework.

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**Part One: Literacy and English Language Arts**

Competency	Selected-Response		Constructed-Response	
	Approximate Number of Items	Approximate Percentage of Test Score	Number of Items	Approximate Percentage of Test Score
0001 Knowledge of Literacy & Language Arts	17	30%	--	--
0002 Instruction in Foundational Literacy Skills	17	30%	--	--
0003 Instruction in English Language Arts	6	10%	--	--
0004 Analysis, Synthesis, and Application	--	--	1	30%
<b>Total</b>	<b>40</b>	<b>70%</b>	<b>1</b>	<b>30%</b>

**Part Two: Mathematics**

Competency	Selected-Response		Constructed-Response	
	Approximate Number of Items	Approximate Percentage of Test Score	Number of Items	Approximate Percentage of Test Score
0001 Number Systems	9	15%	--	--
0002 Algebra and Functions	17	35%	--	--
0003 Measurement, Geometry, Statistics, and Probability	14	30%	--	--
0004 Analysis, Synthesis, and Application	--	--	1	20%
<b>Total</b>	<b>40</b>	<b>80%</b>	<b>1</b>	<b>20%</b>

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**Part Three: Arts and Sciences**

<b>Competency</b>	<b>Selected-Response</b>		<b>Constructed-Response</b>	
	Approximate Number of Items	Approximate Percentage of Test Score	Number of Items	Approximate Percentage of Test Score
0001 Science and Technology	16	40%	--	--
0002 Social Studies	16	40%	--	--
0003 Fine Arts, Health and Fitness, Family and Consumer Science, and Career Development	8	20%	--	--
<b>Total</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

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**ASSESSMENT FRAMEWORK**

**Part One: Literacy and English Language Arts**

Knowledge of Literacy & Language Arts  
Instruction in Foundational Literacy Skills  
Instruction in English Language Arts  
Analysis, Synthesis, and Application

**Part Two: Mathematics**

Number Systems  
Algebra and Functions  
Measurement, Geometry, Statistics, and Probability  
Analysis, Synthesis, and Application

**Part Three: Arts and Sciences**

Science and Technology  
Social Studies  
Fine Arts, Health and Fitness, Family and Consumer Science, and Career Development

The New York State Grade 5–Grade 9 Multi-Subject educator demonstrates a high degree of proficiency in the content knowledge and professional skills required for planning and implementing standards-based literacy and English language arts instruction and assessment that effectively promote student achievement of the Grade 5–Grade 9 standards in the New York State P–12 Learning Standards for English Language Arts (NYSLS). The teacher skillfully applies knowledge of language and literacy development and knowledge of developmentally appropriate, effective materials, instruction, and formal and informal assessment in all aspects of literacy and English language arts to meeting the literacy-learning needs of students from grade 5 through grade 9 across the content areas.

The New York State Grade 5–Grade 9 Multi-Subject educator has the mathematics knowledge and skills necessary to teach effectively in New York State public schools. The teacher understands mathematics as a coherent set of fundamental principles that is built on precise definitions and logical reasoning. The teacher understands and uses mathematical language. The teacher has a deep understanding of the New York State P–12 Learning Standards for Mathematics (NYSLS) and effectively connects the standards for mathematical practice with the standards for mathematical content to demonstrate a high level of mathematical proficiency and to provide highly effective mathematics instruction.

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The New York State Multi-Subject educator has the knowledge and skills necessary to teach effectively in New York State public schools. The teacher draws on knowledge of principles and relationships in the life and physical sciences for scientific inquiry and understands the interconnectedness of science, engineering, and technology. The teacher uses the perspectives of the social sciences to analyze historical events and the contemporary world; interprets works of art by using knowledge of a variety of forms, techniques, and cultural contexts; understands the principles and practices essential to personal health, fitness, and safety; and can apply skills and concepts related to child development, family and interpersonal relationships, personal resources management, and career development.

As used in this document, the term "research-based" refers to those practices that have been shown to be effective in improving learner outcomes through systematic observation or experiment, rigorous data analysis, ability to replicate results, and publication in a peer-reviewed journal. "Evidence-based" refers to strategies empirically shown to improve learner outcomes, though not necessarily based on systematic experiments or published in a peer-reviewed journal.

**FIELDS 231/232/245: MULTI-SUBJECT: TEACHERS OF  
MIDDLE CHILDHOOD (GRADE 5–GRADE 9)  
ASSESSMENT FRAMEWORK**

**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

**COMPETENCY 0001—KNOWLEDGE OF LITERACY & LANGUAGE ARTS**

Performance Expectations

The New York State Grade 5–Grade 9 Multi-Subject teacher has a deep understanding of language and literacy foundations, including an understanding of language and literacy development, individual variation in language and literacy development, principles and practices of literacy assessment and effective instruction, and language structures and processes in literacy. The teacher has a deep understanding of text structures in reading, writing, listening, and speaking, including an understanding of characteristics, elements, and features of a range of text types in literature and informational text written for children, adolescents, and young adults; writing purposes and text types (e.g., arguments, informative/explanatory texts, narratives); and language and communication skills related to speaking and listening for different purposes in an academic setting. The teacher has a deep understanding of how to motivate students to engage in independent literacy practice.

**1.1 Knowledge of Language and Literacy Development**

Performance Indicators

- a. demonstrates knowledge of language processing involved in proficient reading and writing, including phonological, orthographic, semantic, syntactic, and discourse processing
- b. demonstrates knowledge of language and literacy development, including major components of reading development (e.g., phonemic awareness, phonics, vocabulary, fluency, and text comprehension) and stages of development in oral language, phonological awareness, word reading, spelling, fluency, text comprehension, language structures, and written expression
- c. demonstrates knowledge of individual variation in literacy development, including knowledge of specific reading difficulties, and knowledge of cognitive, behavioral, environmental, social, cultural, technological, and linguistic factors affecting language and literacy development
- d. demonstrates knowledge of factors affecting student motivation to engage in independent literacy practice
- e. demonstrates knowledge of principles and practices of literacy assessment (e.g., screening, diagnostic, and progress-monitoring assessments) and essential elements of effective literacy instruction, including systematic, explicit instruction; ongoing assessment; and integrated activities in reading, writing, speaking, and listening to reinforce instruction

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- f. demonstrates knowledge of language structures important to decoding, encoding, and recognizing words, including knowledge of phonemes (e.g., vowels and consonants, similar and contrasting features) and orthography (e.g., grapheme-phoneme correspondence, historical influences on English morphology and spelling, common spelling patterns, irregular words, six basic syllable types in English)
- g. demonstrates knowledge of language structures important to comprehending words and sentences, including knowledge of English morphology (e.g., common inflections, prefixes, and suffixes; Anglo-Saxon, Latin, and Greek morphemes in English), semantic word relationships (e.g., antonyms, multiple-meaning words), and syntactic categories (i.e., parts of speech) and structures (e.g., phrases, sentences)

**1.2 Knowledge of English Language Arts**

Performance Indicators

- a. demonstrates knowledge of characteristics, elements, and features of a range of text types in children's, adolescent, and young-adult literature from a broad range of cultures and periods, including stories (e.g., adventure stories, myths, realistic fiction, allegories, parodies, satire, graphic novels), drama (e.g., plays, both in written form and on film), and poetry (e.g., narrative, lyrical, and free verse poems; sonnets; odes; ballads; epics)
- b. demonstrates knowledge of characteristics, elements, and features of a range of text types in literary nonfiction from a broad range of cultures and periods, including the subgenres of exposition, argument, and functional text (e.g., personal essays; speeches; opinion pieces; essays about art or literature; biographies; memoirs; journalism; historical, scientific, technical, or economic accounts) and including digital sources, written for a broad audience
- c. applies knowledge of visual literacy and effective viewing to analyze, evaluate, and integrate information and ideas presented in diverse media or formats, including print and nonprint
- d. applies knowledge of effective writing to analyze and evaluate opinion pieces and arguments, including knowledge of rhetorical features, stylistic features, organizational structures, and key elements and characteristics of this text type
- e. applies knowledge of effective writing to analyze and evaluate informative/explanatory texts, including knowledge of rhetorical features, stylistic features, organizational structures, and key elements and characteristics of this text type
- f. applies knowledge of effective writing to analyze and evaluate narratives, including knowledge of rhetorical features, stylistic features, organizational structures, and key elements and characteristics of this text type



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- g. analyzes and evaluates the elements, characteristics, and features of effective communication and collaboration in academic discussions with diverse partners (e.g., effective preparation and focus, discussion rules and strategies, recognition of diverse perspectives and cultural backgrounds)
- h. analyzes and evaluates elements of an effective oral presentation that support listener comprehension and analysis (e.g., expressing ideas with clarity and precision, sequencing ideas logically, using multimedia or visual displays), including features of spoken language (e.g., word choice, rate, pitch, tone, volume) and nonverbal cues (e.g., body language, facial expressions) that affect a speaker's ability to communicate effectively
- i. demonstrates knowledge of how language functions in different communicative contexts, including differences in grammar, usage, and meaning in different varieties of English (e.g., academic English, standard English, varieties of vernacular English), and language choices that affect meaning and style in written or spoken discourse

**COMPETENCY 0002—INSTRUCTION IN FOUNDATIONAL LITERACY SKILLS**

Performance Expectations

An effective Grade 5–Grade 9 Multi-Subject teacher is skilled in providing instruction for students from grade 5 through grade 9 that promotes their ongoing development of vocabulary and language knowledge and skills and their independent text comprehension skills. The teacher applies knowledge of effective assessment and data-driven instruction in vocabulary knowledge and skills; language knowledge and skills, including fluent decoding skills; and text comprehension skills and strategies. The teacher applies knowledge of dimensions of text complexity and factors affecting text comprehension development to selection of appropriate materials for literacy instruction. The teacher plans developmentally appropriate data-driven text comprehension and language instruction that meets the learning needs of students from grade 5 through grade 9.

**2.1 Instruction in Language Vocabulary**

Performance Indicators

- a. applies knowledge of factors that affect a student's vocabulary development (e.g., the importance of early oral language and content experiences; the role of exposure to written language through listening to and reading a wide variety of texts) and the importance of vocabulary knowledge to text comprehension and academic achievement

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- b. demonstrates understanding of how providing students with a broad range of academic experiences in reading, writing, listening, and speaking promotes their development of robust vocabularies, including understanding of the importance of incremental, repeated exposures to words in different contexts and opportunities to use new vocabulary in a variety of modalities
- c. demonstrates understanding of NYSLS grade-specific standards in vocabulary acquisition and use for Grade 5–Grade 9 and the relationship of these standards to the development of college and career readiness in vocabulary by the end of grade 12
- d. applies knowledge of developmentally appropriate, research- and evidence-based instructional practices in word study, including the development of word consciousness; instruction in general academic words (Tier Two) and domain-specific words (Tier Three); building background knowledge as a base for vocabulary development; building students' understanding of figurative language, word relationships, and nuances of word meanings; and building vocabulary knowledge related to specific texts
- e. applies knowledge of developmentally appropriate, research- and evidence-based instructional practices for providing opportunities to hear, read, and use new vocabulary in a variety of meaningful contexts to develop depth of understanding of words
- f. applies knowledge of developmentally appropriate research- and evidence-based instructional practices in independent word-learning strategies (e.g., using structural analysis, context clues, classroom resources)

**2.2 Instruction in Language Knowledge**

Performance Indicators

- a. demonstrates understanding of how providing students with a broad range of academic experiences in reading, writing, listening, and speaking promotes their command of standard English grammar and conventions, including understanding of the importance of opportunities to use standard English language structures in a variety of modalities
- b. applies knowledge of factors that affect a student's developing command of conventions of standard English grammar and usage when reading, writing, listening, and speaking
- c. demonstrates understanding of NYSLS grade-specific standards in conventions of standard English for Grade 5–Grade 9 and the relationship of these standards to the development of college and career readiness in language knowledge and conventions of standard English by the end of grade 12

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- d. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' command of standard English grammar and usage when writing or speaking
- e. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' command of standard English capitalization, punctuation, and spelling when writing
- f. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' development of and skill in applying grade-level phonics and word analysis skills when reading
- g. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' knowledge and command of varieties of English and language choices in reading, writing, speaking, and listening

**2.3 Text Complexity and Instruction in Text Comprehension**

Performance Indicators

- a. applies knowledge of factors affecting students' development of text comprehension (e.g., vocabulary, background content knowledge, decoding skills, reading fluency) as it pertains to students from grade 5 through grade 9
- b. demonstrates understanding of the importance of skill in reading complex text to the development of college and career readiness
- c. demonstrates understanding of the role of wide reading and experiences in close reading and analysis of high-quality literature and literary nonfiction in students' development of college and career readiness literacy skills
- d. demonstrates understanding of the role of academic conversations in comprehension development and applies knowledge of strategies for planning and facilitating purposeful academic conversations focused on the meaning and content of texts
- e. demonstrates understanding of the role of asking a range of cognitively complex questions that require students to respond by using text-based evidence
- f. applies knowledge of strategies for scaffolding and extending students' discussions of text content, their analyses of and responses to a text, and their purposeful engagement in reading and reading-related activities
- g. demonstrates knowledge of strategies for planning a content-rich, text-rich classroom environment and for promoting independent reading of a wide range of text types and genres to support text comprehension through the development of academic background knowledge

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- h. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of reading fluency sufficient to support comprehension of grade-level texts, including their skill in reading prose and poetry orally with accuracy, appropriate rate, and expression
- i. applies knowledge of strategies for using oral language and writing activities to reinforce and extend students' comprehension of particular texts and their developing text comprehension skills and strategies
- j. applies knowledge of quantitative tools and measures for evaluating text complexity
- k. applies knowledge of qualitative dimensions of complexity in texts (e.g., purpose, levels of meaning, clarity, background knowledge demands)
- l. applies knowledge of reader variables (e.g., motivation, background knowledge, experiences) and task variables (e.g., purpose and complexity of the task) when matching reader to the text and task
- m. applies knowledge of text complexity in the selection of texts that are appropriate for supporting student learning goals
- n. applies knowledge of assessments of factors that affect reading comprehension and applies the results to plan appropriate comprehension instruction and interventions

**COMPETENCY 0003—INSTRUCTION IN ENGLISH LANGUAGE ARTS**

Performance Expectations

An effective Grade 5–Grade 9 Multi-Subject teacher is skilled in providing instruction for students from grade 5 through grade 9 that promotes their development of proficient reading, writing, speaking, and listening skills leading to college and career readiness by the end of grade 12. The teacher provides effective assessment and data-driven instruction in analyzing, evaluating, and integrating ideas and information from literature and informational text; in writing different types of text, writing processes, and research skills; and in academic speaking and listening skills. The teacher applies knowledge of factors, including student interest, that affect the development of reading, writing, speaking, and listening skills to plan developmentally appropriate instruction in English language arts that meets the learning needs of students from grade 5 through grade 9.

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

**3.1 Instruction in Reading Literature**

Performance Indicators

- a. demonstrates understanding of NYSLS grade-specific standards in reading literature for Grade 5–Grade 9 and the relationship of these standards to the development of college and career readiness in reading by the end of grade 12
- b. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' comprehension and analysis of key ideas and details in literature
- c. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' understanding and analysis of craft and structure in literary texts
- d. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of skills for integrating, evaluating, and analyzing knowledge and ideas from literary texts
- e. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of independent strategies that support students' reading, listening to, or viewing literary texts in different mediums with purpose and understanding (e.g., making and verifying predictions, visualizing, making connections)
- f. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of skills for responding to literature

**3.2 Instruction in Reading Informational Text**

Performance Indicators

- a. demonstrates understanding of NYSLS grade-specific standards in reading informational text for Grade 5–Grade 9 and the relationship of these standards to the development of college and career readiness in reading by the end of grade 12
- b. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' comprehension and analysis of key ideas and details in informational text
- c. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' understanding and analysis of craft and structure in informational text

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- d. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of independent strategies that support reading, listening to, or viewing informational text in different media with purpose and understanding (e.g., making and verifying predictions, visualizing, making connections)
- e. applies knowledge of developmentally appropriate, research- and evidence-based assessment and instructional practices to promote students' development of skills for integrating, analyzing, and evaluating knowledge and ideas from informational text

**3.3 Instruction in Writing Different Types of Text**

Performance Indicators

- a. demonstrates understanding of NYSLS grade-specific standards in writing for Grade 5–Grade 9 and the relationship of these standards to the development of writing knowledge and skills leading to college and career readiness in writing different types of text by the end of grade 12
- b. demonstrates knowledge of strategies for creating a text-rich classroom environment, including text-based discussions and explicit instruction that reinforces students' understanding and application of writing functions and conventions
- c. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in composing pieces corresponding to specific text types, including arguments, informative/explanatory texts, narrative texts, stories, plays, and other literary and informational forms, using text-based evidence as appropriate
- d. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in creating and presenting responses to literature, using text-based evidence as appropriate, that make personal, cultural, textual, and thematic connections across genres and use a variety of media and genres

**3.4 Instruction in Writing and Research to Build and Present Knowledge**

Performance Indicators

- a. demonstrates understanding of NYSLS grade-specific standards in production and distribution of writing and in research to build and present knowledge for Grade 5–Grade 9 and the relationship of these standards to the development of writing knowledge and skills leading to college and career readiness in writing by the end of grade 12

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- b. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in processes and strategies for producing and distributing writing that is appropriate to task, purpose, and audience
- c. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to develop students' skill in conducting research and presenting knowledge
- d. applies knowledge of instruction and activities that promote students' independence and skill in writing over extended time frames (with time for research, reflection, and revision) and shorter time frames for a range of discipline-specific tasks, purposes, and audiences
- e. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in using digital tools in research and in composing and presenting written and multimedia texts

**3.5 Instruction in Speaking and Listening**

Performance Indicators

- a. demonstrates understanding of NYSLS grade-specific standards in speaking and listening for Grade 5–Grade 9 and the relationship of these standards to the development of college and career readiness in speaking and listening skills by the end of grade 12
- b. demonstrates knowledge of the importance of providing experiences using oral language purposefully and regularly in the classroom and the use of oral language activities to reinforce instruction in reading, writing, and language skills
- c. applies knowledge of strategies for planning a collegial literate environment that promotes students' participation and collaboration in classroom conversations (i.e., an environment that reflects and values cultural and language diversity and a variety of perspectives, supports involvement of family and community members in students' language and literacy development, and promotes respect for students at all levels of language and literacy development)
- d. applies knowledge of strategies for promoting students' ability to facilitate mutual understanding and effective communication in collaborative conversations between individuals with different perspectives or cultural backgrounds
- e. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' development of oral communication skills, nonverbal communication skills, and listening skills that support their comprehension of and participation in collaborative conversations
- f. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in using listening strategies that are appropriate for given contexts and purposes

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**FIELD 231: PART ONE: LITERACY AND ENGLISH LANGUAGE ARTS**

- g. applies knowledge of developmentally appropriate assessment and data-driven instructional practices that promote students' skill in evaluating a speaker's point of view, reasoning, and use of evidence and rhetoric
- h. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in presenting knowledge and ideas to various audiences and for various purposes
- i. applies knowledge of developmentally appropriate assessment and data-driven instructional practices to promote students' skill in strategies for integrating and evaluating information presented in diverse media and formats (e.g., visually, quantitatively, orally) and for making strategic use of digital media and visual representations to support their oral presentations of knowledge and ideas

**COMPETENCY 0004—ANALYSIS, SYNTHESIS, AND APPLICATION**

Performance Expectations

An effective Grade 5–Grade 9 Multi-Subject teacher applies relevant knowledge of content and pedagogical content knowledge in reading, writing, listening, speaking, language knowledge and conventions, and vocabulary acquisition to analyze and synthesize literacy assessment data about an individual student that are provided from multiple sources (e.g., a transcript of a student's oral reading performance, a transcript of a conversation between a student and teacher about a reading passage, a student's writing sample, a teacher's observational notes, standardized test results) and to plan appropriate instruction for the student based on that analysis.

Performance Indicators

- a. analyzes, interprets, synthesizes, and discusses accurately and appropriately the results of literacy assessments for an individual student
- b. demonstrates the ability to select appropriate examples to support an analysis of a reading performance and/or other literacy assessment data from multiple sources, using sound reasoning and knowledge of content and pedagogical content knowledge
- c. selects and describes accurately and appropriately effective strategies, activities, or interventions to address a student's identified need and/or to build on a student's identified strength in reading, writing, listening, speaking, language knowledge and conventions, and/or vocabulary acquisition
- d. demonstrates the ability to discuss the effectiveness of selected instructional strategies, activities, or interventions in addressing a student's need and/or building on the student's strength using sound reasoning and knowledge of content and pedagogical content knowledge



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ASSESSMENT FRAMEWORK**

**FIELD 232: PART TWO: MATHEMATICS**

**COMPETENCY 0001—NUMBER SYSTEMS**

Performance Expectations

The New York State Grade 5–Grade 9 Multi-Subject teacher demonstrates deep knowledge of the properties of mathematical operations and their inverses and how these operations apply to whole numbers, fractions, integers, and algebraic expressions. The teacher justifies and connects visual models to algorithms and interprets algebra as an extension of arithmetic. The teacher applies connections between multiplication and division and ratios and rates; and ratios and proportional reasoning, linear equations, and concepts of measurement and geometry. The teacher demonstrates a deep conceptual understanding of the rational numbers and interprets the real number system as an extension of the rational numbers. The teacher demonstrates the ability to work accurately with numbers and operations, ratios and proportional relationships, and uses them to model and solve mathematical and real-world problems.

**1.1 Number and Operations**

Performance Indicators

- a. analyzes operations and the relationships between operations
- b. applies methods for representing situations and problems involving addition, subtraction, multiplication, and division of integers
- c. writes and interprets numerical expressions
- d. generates and analyzes patterns and relationships and identifies apparent features of patterns that are not explicit in the rule used to generate them
- e. understands the place value system
- f. uses and justifies computational algorithms
- g. uses and justifies the use of equivalent fractions
- h. interprets multiplication as scaling
- i. understands and performs operations with decimals
- j. applies and extends previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers
- k. solves mathematical and real-world problems involving the four basic operations with rational numbers, including the use of the distributive law to justify properties of rational numbers
- l. applies number theory concepts (e.g., primes, divisibility, factors, least common multiple, greatest common factor)
- m. applies and extends understanding of arithmetic and the order of operations to algebraic expressions, equations, and inequalities

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- n. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLs related to number and operations

**1.2 Ratios and Proportional Relationships**

Performance Indicators

- a. uses ratio and rate reasoning to solve real-world and mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, equations, graph pairs of value in the coordinate plane)
- b. solves unit rate problems, including those involving unit pricing; constant speed; and ratios of lengths, areas, and other quantities measured in like or unlike units
- c. expresses percents of a quantity as a rate per 100 and solves mathematical and real-world problems involving percents
- d. uses ratio reasoning to convert units within and between measurement systems
- e. identifies the constant of proportionality in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships
- f. represents proportional relationships by equations
- g. explains the relationships between graphs of proportional relationships in terms of the situation represented by the relationship
- h. uses proportional relationships to solve multistep ratio and percent problems (e.g., simple interest rates, commissions, percent increase or decrease, percent error)
- i. analyzes connections between proportional relationships, lines, and linear equations
- j. uses similar triangles to explain why the slope is the same between any two distinct points on a nonvertical line in the coordinate plane and graphs and analyzes linear equations
- k. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLs related to ratios and proportional relationships

**1.3 Rational and Real Number Systems**

Performance Indicators

- a. applies properties of opposite signs of rational numbers, ordering, and absolute value of rational numbers

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- b. applies knowledge of numbers that are not rational and finds rational approximations of irrational numbers
- c. applies properties of repeating-decimal expansions and converts between repeating-decimal expansions and rational numbers
- d. analyzes and applies properties of integer exponents and extends them to rational exponents
- e. understands how the definition and meaning of rational exponents allows for extending the properties of integer exponents
- f. rewrites expressions involving radicals and rational exponents by using the properties of exponents
- g. uses square roots and cube roots to represent solutions to problems and equations
- h. performs operations with numbers expressed in scientific notation
- i. uses properties of rational and irrational numbers
- j. uses units as a way to understand problems and to guide the solution of multistep problems; chooses and interprets units consistently in formulas
- k. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLS related to rational and real number systems

**COMPETENCY 0002—ALGEBRA AND FUNCTIONS**

Performance Expectations

The New York State Grade 5–Grade 9 Multi-Subject teacher demonstrates deep knowledge of the structure of algebraic expressions, how algebraic manipulations are governed by properties of operations and exponents, the nature of solutions to equations, and reasoning processes for manipulating expressions and solving equations. The teacher works accurately with expressions and equations, and uses algebra to model and solve mathematical and real-world problems. The teacher demonstrates knowledge of the concept of a function and how functions are used to describe relationships between quantities, represent and interpret functions in various ways, use functions to model relationships, and build new functions from existing functions. The teacher makes connections between functions, expressions, equations, modeling, coordinates, and graphs.

**2.1 Algebra**

Performance Indicators

- a. uses properties of operations to generate equivalent expressions

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- b. solves mathematical and real-world problems, using numerical and algebraic expressions and equations
- c. understands the vocabulary of mathematical expressions (e.g., terms, factors, coefficients) and interprets their structures
- d. writes expressions in equivalent forms to solve problems (e.g., factor quadratic expressions, complete the square, use properties of exponents)
- e. performs arithmetic of polynomials and understands the algebraic structure of the set of polynomials (i.e., analogous to the integers)
- f. analyzes and applies the relationship between zeros and factors of polynomials
- g. uses polynomial identities to solve problems and understands the binomial theorem for positive integer exponents
- h. rewrites rational expressions and understands their algebraic structure (i.e., analogous to rational numbers)
- i. creates equations and inequalities in one variable and uses them to solve mathematical and real-world problems (e.g., based on verbal descriptions, tables, graphs), including equations that arise from linear, quadratic, and simple rational and exponential functions
- j. creates equations in two or more variables to represent relationships between quantities, and graphs equations on coordinate axes with labels and scales
- k. analyzes and solves linear equations and pairs of simultaneous linear equations
- l. applies knowledge of solving equations as a process of reasoning, explains the reasoning, solves equations and inequalities in one variable, and solves systems of equations in two variables
- m. uses systems of equations or inequalities to represent situations, including constraints (e.g., use inequalities to represent nutritional and cost constraints on combinations of different foods)
- n. represents and solves equations and inequalities graphically
- o. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLs related to algebra

**2.2 Functions**

Performance Indicators

- a. applies the concept of a function, identifies the range and domain of a function, and uses function notation appropriately

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- b. interprets functions that arise in applications in terms of the context, and analyzes key features of functions (e.g., intercepts, intervals where the function is increasing, relative maximums or minimums, zeros, asymptotes, end behavior)
- c. analyzes functions (e.g., linear, quadratic, square root, piecewise, polynomial, exponential, logarithmic) using different representations, such as graphs, verbal descriptions, equivalent algebraic forms, and numeric tables
- d. builds a function that models a relationship between two quantities
- e. builds new functions from existing functions (e.g., identifies the effect of replacing  $f(x)$  with  $f(x + k)$ , composes functions, finds inverse functions)
- f. constructs and compares linear, quadratic, and exponential models and distinguishes between those situations (mathematical or real-world) that can be modeled with linear functions and those that can be modeled with exponential functions
- g. interprets expressions and parameters in linear, quadratic, or exponential functions in terms of the context and the situation they model
- h. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLs related to functions

**COMPETENCY 0003—MEASUREMENT, GEOMETRY, STATISTICS, AND  
PROBABILITY**

Performance Expectations

The New York State Grade 5–Grade 9 Multi-Subject teacher demonstrates deep knowledge of concepts related to measurement and geometry. The teacher applies measurement concepts and standard units and interprets geometry as a system based on precise definitions, mathematical reasoning, and proof. The teacher makes connections between operations and measurement and applies measurement and geometry concepts to model and solve mathematical and real-world problems. The teacher works with and interprets data, uses measures of center and variability, and draws inferences from data distributions. The teacher applies knowledge of probability to analyze chance events and develop probability models, and understands how statistics and chance processes are used to make inferences.

**3.1 Measurement and Geometry**

Performance Indicators

- a. analyzes attributes of polygons and circles
- b. analyzes and applies properties of lines and angles to solve problems

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- c. solves problems involving measurement and conversion of measurement units
- d. relates concepts of perimeter, area, and volume to number operations
- e. solves mathematical and real-world problems involving angle measure, perimeter, area, surface area, and volume, including problems involving cones, cylinders, and spheres
- f. solves problems involving congruence
- g. analyzes transformations (e.g., rotations, reflections, and translations) in the coordinate plane
- h. graphs points and shapes on the coordinate plane to solve mathematical and real-world problems
- i. understands and applies the Pythagorean theorem to solve a variety of problems, including distance problems in the coordinate plane
- j. analyzes the proof of theorems about lines and angles, triangles, and parallelograms
- k. analyzes similarity in terms of similarity transformations and scale factors and solves problems involving similar figures
- l. defines trigonometric ratios and solves mathematical and real-world problems involving right triangles
- m. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLs related to measurement and geometry

**3.2 Data and Statistics and Probability**

Performance Indicators

- a. applies concepts of statistical variability and measures and summarizes and describes data distributions (e.g., number lines, dot plots, histograms, box plots)
- b. demonstrates knowledge of the use of random sampling to draw inferences about a population
- c. draws informal comparative inferences about two populations using data distributions and measure of center (e.g., mean, median) and variability (e.g., interquartile range, mean absolute deviation, standard deviation)
- d. investigates chance processes and develops, uses, and evaluates probability models (e.g., independent and dependent events) using methods such as data, organized lists, tables, tree diagrams, and simulations
- e. investigates patterns of association in bivariate data using scatter plots, linear models, and two-way tables

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- f. makes inferences and justifies conclusions from sample surveys, experiments, and observation studies
- g. demonstrates knowledge of how to analyze and interpret assessment data to inform and plan instruction that engages and challenges all students to meet or exceed the NYSLS related to data and statistics and probability

**COMPETENCY 0004—ANALYSIS, SYNTHESIS, AND APPLICATION**

Performance Expectations

The New York State Grade 5–Grade 9 Multi-Subject teacher accurately and effectively applies relevant content knowledge and pedagogical content knowledge in number and operations, operations and algebraic thinking, fractions, ratio and proportional reasoning, and measurement and data to analyze and synthesize assessment data about an individual student, identify conceptual or procedural errors, and provide a well-reasoned and accurate analysis of the student's mathematical knowledge and motivation. The teacher uses the assessment results and knowledge of how students learn to present an appropriate instructional approach that meets the needs of the student.

Performance Indicators

- a. analyzes and interprets samples of a student's work and other assessment data to monitor student progress and determine a student's strengths and areas of need in mathematics
- b. demonstrates knowledge of the content by identifying and analyzing any errors or misconceptions in work samples
- c. describes appropriate and effective content-specific instructional strategies, activities, or interventions to address a student's identified needs (e.g., skill deficits, lack of motivation)
- d. demonstrates the ability to generate real-world scenarios that illustrate specific mathematical concepts
- e. demonstrates the ability to justify the effectiveness of selected instructional strategies, activities, or interventions for promoting a student's mathematical understanding

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**FIELD 245: PART THREE: ARTS AND SCIENCES**

**COMPETENCY 0001—SCIENCE AND TECHNOLOGY**

Performance Expectations

The New York State Multi-Subject teacher demonstrates knowledge of the processes of scientific inquiry and investigations; concepts, principles, and theories pertaining to the physical setting and the living environment; technology and engineering design; and common themes that connect mathematics, science, and technology.

**1.1 Understand and apply the principles and processes of scientific inquiry and investigation.**

Performance Indicators

- a. formulates hypotheses based on reasoning and preliminary results or information
- b. evaluates the soundness and feasibility of a proposed scientific investigation
- c. applies mathematical rules or formulas (including basic statistics) to analyze given experimental or observational data
- d. interprets data presented in one or more graphs, charts, or tables to determine patterns or relationships
- e. evaluates the validity of a scientific conclusion in a given situation
- f. applies procedures for the safe and appropriate use of equipment and the care and humane treatment of animals in the laboratory

**1.2 Understand and apply concepts, principles, and theories pertaining to the physical setting (including Earth science, chemistry, and physics).**

Performance Indicators

- a. analyzes interactions between the Earth, the Moon, and the Sun (e.g., seasonal changes, the phases of the Moon)
- b. analyzes the effects of interactions between components of air, water, and land (e.g., weather, volcanism, erosion)
- c. distinguishes between physical and chemical properties of matter and between physical and chemical changes in matter
- d. distinguishes between forms of energy and identifies the transformations of energy observed in everyday life
- e. analyzes the effects of forces on objects in given situations
- f. infers the physical science principle (e.g., effects of common forces, conservation of energy) illustrated in a given situation



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**1.3 Understand and apply concepts, principles, and theories pertaining to the living environment.**

Performance Indicators

- a. recognizes the characteristics of living things and common life processes
- b. analyzes processes that contribute to the continuity of life (e.g., reproduction and development, inheritance of genetic information)
- c. analyzes the factors that contribute to change in organisms and species over time
- d. compares the ways in which a variety of organisms carry out basic life functions and maintain dynamic equilibrium (e.g., obtaining nutrients, maintaining water balance)
- e. analyzes the effects of environmental conditions (e.g., temperature, availability of water and sunlight) on living organisms and the relationships between plants and animals within a community
- f. infers the life science principle (e.g., adaptation, homeostasis) illustrated in a given situation

**1.4 Apply knowledge of technology and the principles of engineering design.**

Performance Indicators

- a. demonstrates an understanding of technological systems (e.g., transportation system) and the principles on which technological systems are constructed (e.g., the use of component subsystems)
- b. analyzes the roles of modeling and optimization in the engineering design process
- c. evaluates a proposed technological solution to a given problem or need
- d. applies criteria for selecting tools, materials, and other resources to design and construct a technological product or service
- e. recognizes appropriate tests of a given technological solution
- f. analyzes the positive and negative effects of technology on individuals, society, and the environment

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**1.5 Understand the relationships between and the common themes that connect mathematics, science, and technology, and the application of knowledge and skills in these disciplines to other areas of learning.**

Performance Indicators

- a. makes connections between the common themes of mathematics, science, and technology (e.g., systems, models, magnitude and scale, equilibrium and stability, patterns of change)
- b. applies principles of mathematics, science, and technology to model a given situation (e.g., the movement of energy and nutrients between a food chain and the physical environment)
- c. applies principles of mathematics, science, and technology to explore phenomena from other areas of learning (e.g., applying statistical methodologies to examine census data)
- d. designs solutions to problems in the physical and social worlds, using mathematical, scientific, and technological reasoning and procedures
- e. analyzes the effects of human activities (e.g., burning fossil fuels, clear-cutting forests) on the environment and evaluates the use of science and technology in solving problems related to these effects

**COMPETENCY 0002—SOCIAL STUDIES**

Performance Expectations

The New York State Multi-Subject teacher demonstrates understanding of major ideas, eras, themes, developments, and turning points in the history of New York State, the United States, and the world; geographic concepts and phenomena and the interrelationships of geography, society, and culture; human development and interactions; economic and political principles and systems; the roles, rights, and responsibilities of citizenship in the United States; and skills related to social studies, including gathering, organizing, mapping, evaluating, interpreting, and displaying information.

**2.1 Understand major ideas, eras, themes, developments, and turning points in the history of New York State, the United States, and the world.**

Performance Indicators

- a. defines important conceptual terms (e.g., racism, nation-state, nationalism, feudalism) and uses them to analyze general historical phenomena and specific historical events

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- b. analyzes the social effects of major developments in human history (e.g., the agricultural revolution, the scientific revolution, the industrial revolution, the information revolution)
- c. understands major political, social, economic, and geographic characteristics of ancient civilizations and the connections and interactions between these civilizations
- d. examines reasons for organizing periods of history in different ways and compares alternative interpretations of key events and issues in New York State, United States, and world history
- e. analyzes the effects of European contact with indigenous cultures and the effects of European settlement on New York State and the Northeast
- f. analyzes how the roles and contributions of individuals and groups helped shape United States social, political, economic, cultural, and religious life

**2.2 Understand geographic concepts and phenomena and analyze the interrelationships of geography, society, and culture in the development of New York State, the United States, and the world.**

Performance Indicators

- a. defines important geographic terms and concepts (e.g., habitat, resource, cultural diffusion, ecology) and uses them to analyze various geographic issues, problems, and phenomena
- b. demonstrates an understanding of the six essential elements of geography: the world in spatial terms, places and regions, physical settings, human systems, environment and society, and the use of geography
- c. recognizes physical characteristics of the Earth's surface and the continual reshaping of it by physical processes (e.g., how weather, climate, and the water cycle influence different regions)
- d. analyzes the development and interaction of social, political, cultural, and religious systems in different regions of New York State, the United States, and the world
- e. examines ways in which economic, environmental, and cultural factors influence demographic change and interprets geographic relationships, such as population density and spatial distribution patterns
- f. analyzes the impact of human activity on the physical environment (e.g., industrial development, population growth, deforestation)

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**2.3 Understand concepts and phenomena related to human development and interactions (including anthropological, psychological, and sociological concepts).**

Performance Indicators

- a. uses concepts, theories, and modes of inquiry drawn from anthropology, psychology, and sociology to examine general social phenomena and issues related to intercultural understanding
- b. evaluates factors that contribute to personal identity (e.g., family, group affiliations, socialization processes)
- c. recognizes how language, literature, the arts, media, architecture, traditions, beliefs, values, and behaviors influence and/or reflect the development and transmission of culture
- d. analyzes the roles and functions of social groups and institutions in the United States (e.g., ethnic groups, schools, religions) and their influence on individual and group interactions
- e. analyzes why individuals and groups hold different or competing points of view on issues, events, or historical developments
- f. understands the processes of social and cultural change

**2.4 Understand economic and political principles, concepts, and systems, and relate this knowledge to historical and contemporary developments in New York State, the United States, and the world.**

Performance Indicators

- a. defines important economic and political terms and concepts (e.g., scarcity, opportunity cost, supply and demand, productivity, power, natural rights, checks and balances) and uses them to analyze general phenomena and specific issues
- b. analyzes the basic structure, fundamental ideas, accomplishments, and problems of the United States economic system
- c. recognizes and compares basic characteristics of major models of economic organization (e.g., traditional, market, command) and various governmental systems (e.g., democratic, authoritarian)
- d. analyzes values, principles, concepts, and key features of American constitutional democracy (e.g., individual freedom, separation of powers, due process, federalism)
- e. compares different perspectives regarding economic and political issues and policies in New York State and the United States (e.g., taxing and spending decisions)

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- f. analyzes ways in which the United States has influenced other nations (e.g., in the development of democratic principles and human rights) and how other nations have influenced United States politics and culture

**2.5 Understand the roles, rights, and responsibilities of citizenship in the United States and the skills, knowledge, and attitudes necessary for successful participation in civic life.**

Performance Indicators

- a. analyzes the personal and political rights guaranteed in the Declaration of Independence, the United States Constitution, the Constitution of the State of New York, and major civil rights legislation
- b. recognizes the core values of the United States democratic system (e.g., justice, honesty, the rule of law, self-discipline, due process, equality, majority rule, respect for minority rights)
- c. demonstrates an understanding of the United States election process and the roles of political parties, pressure groups, and special interests in the United States political system
- d. explains what citizenship means in a democratic society and analyzes the ways in which citizens participate in and influence the political process in the United States (e.g., the role of public opinion and citizen action groups in shaping public policy)
- e. examines the rights, responsibilities, and privileges of individuals in relation to family, social group, career, community, and nation
- f. analyzes factors that have expanded or limited the role of the individual in United States political life during the twentieth century (e.g., female suffrage, Jim Crow laws, growth of presidential primaries, role of the media in political elections)

**2.6 Understand and apply skills related to social studies, including gathering, organizing, mapping, evaluating, interpreting, and displaying information.**

Performance Indicators

- a. evaluates the appropriateness of various resources and research methods for meeting specified information needs (e.g., atlas, bibliography, almanac, database, survey, poll) and applies procedures for retrieving information using traditional resources and current technologies (e.g., CD-ROM, the Internet)
- b. demonstrates an understanding of concepts, tools, and technologies for mapping information about the spatial distribution of people, places, and environments (e.g., mapping grids, latitude and longitude, the advantages and limitations of different types of maps and map projections)

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- c. analyzes information in social studies materials (e.g., identifying central themes in important historical speeches or documents, distinguishing fact from opinion, evaluating multiple points of view in policy debates)
- d. interprets information presented in one or more graphic representations (e.g., graph, table, map) and translates written or graphic information from one form to the other
- e. summarizes the purpose or point of view of a historical narrative

**COMPETENCY 0003—FINE ARTS, HEALTH AND FITNESS, FAMILY AND  
CONSUMER SCIENCE, AND CAREER DEVELOPMENT**

Performance Expectations

The New York State Multi-Subject teacher demonstrates understanding of the concepts, techniques, and materials of visual arts, music, theater, and dance, including cultural dimensions; principles and practices of health and safety; concepts and practices of physical education and health-related fitness; concepts and practices related to child development and care and knowledge of family and interpersonal relationships; skills and procedures related to consumer economics and resource management; and knowledge of career development and workplace skills, behaviors, and responsibilities.

**3.1 Understand the concepts, techniques, and materials of the visual arts; analyze works of visual art; and understand the cultural dimensions and contributions of the visual arts.**

Performance Indicators

- a. identifies basic elements (e.g., line, color) and principles (e.g., unity, balance) of art and recognizes how they are used to communicate meaning in works of art
- b. analyzes two-dimensional and three-dimensional works of art in terms of their visual and sensory characteristics
- c. applies knowledge of the characteristics of various art media (e.g., two-dimensional, three-dimensional, electronic) to select a medium appropriate for a given artistic purpose or intent
- d. applies knowledge of basic tools and techniques for working with various materials (e.g., clay, textiles, wood)
- e. analyzes how works of art reflect the cultures in which they were produced (e.g., materials or techniques used, subject matter, style)
- f. compares works of art of different cultures, eras, and artists in terms of characteristics such as theme, imagery, and style

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**3.2 Understand concepts, techniques, and materials for producing, listening to, and responding to music; analyze works of music; and understand the cultural dimensions and contributions of music.**

Performance Indicators

- a. compares various types of instruments (e.g., strings, percussion, woodwind, brass, electronic) in terms of the sounds they produce
- b. defines and applies common musical terms (e.g., pitch, tempo)
- c. uses basic scientific concepts to explain how music-related sound is produced, transmitted through air, and received by listeners
- d. relates characteristics of music (e.g., rhythm, beat) to musical effects produced
- e. recognizes basic technical skills that musicians must develop to produce an aesthetically acceptable performance (e.g., manual dexterity, breathing techniques, knowledge of musical notation)
- f. analyzes how different cultures have created music reflective of their histories and societies (e.g., call-and-response songs, ballads, work songs, folk songs)

**3.3 Understand concepts, techniques, and materials related to theater and dance; analyze works of drama and dance; and understand the cultural dimensions and contributions of drama and dance.**

Performance Indicators

- a. compares dramatic and theatrical forms and their characteristics (e.g., pantomime, improvisation)
- b. relates types of dance (e.g., ballet, folk, modern) to their characteristic forms of movement, expressive qualities, and cultural origins
- c. analyzes how technical aspects of performance (e.g., costumes, props, lighting) affect the message or overall impression created by a performance
- d. recognizes how language, voice, gesture, and movement are used to develop character and create interaction between performers in theatrical productions
- e. analyzes ways in which different cultures have used drama and dance (e.g., to teach moral lessons, to preserve cultural traditions, to affirm the sense of community, to entertain)

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**FIELD 245: PART THREE: ARTS AND SCIENCES**

**3.4 Understand basic principles and practices of personal, interpersonal, and community health and safety; and apply related knowledge and skills (e.g., decision making, problem solving) to promote personal well-being.**

Performance Indicators

- a. identifies common health problems and explains how they can be prevented, detected, and treated
- b. recognizes the basic knowledge and skills necessary to support positive health choices and behaviors
- c. applies decision-making and problem-solving skills and procedures in individual and group situations (e.g., situations related to personal well-being, self-esteem, and interpersonal relationships)
- d. recognizes basic principles of good nutrition and uses them to plan a diet that accommodates nutritional needs, activity level, and optimal weight
- e. analyzes contemporary health-related issues (e.g., HIV, teenage pregnancy, suicide, substance abuse) in terms of their causes, effects, and significance for individuals, families, and society and evaluates strategies for their prevention
- f. interprets advertising claims for health-care products and services and distinguishes between valid and invalid health information
- g. analyzes environmental conditions and their impact upon personal and community health and safety

**3.5 Understand physical education concepts and practices related to the development of personal living skills.**

Performance Indicators

- a. recognizes sequences and characteristics of physical development throughout the various developmental levels
- b. demonstrates knowledge of activities that promote the development of motor skills (e.g., locomotor, manipulative, body mechanics) and perceptual awareness skills (e.g., body awareness, spatial and directional awareness)
- c. applies safety concepts and practices associated with physical activities (e.g., doing warm-up exercises, wearing protective equipment)
- d. understands skills necessary for successful participation in given sports and activities (e.g., spatial orientation, eye-hand coordination, movement)
- e. analyzes ways in which participation in individual or group sports or physical activities can promote personal living skills (e.g., self-discipline, respect for self and others, resource management) and interpersonal skills (e.g., cooperation, sportsmanship, leadership, teamwork, communication)



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**FIELD 245: PART THREE: ARTS AND SCIENCES**

**3.6 Understand health-related physical fitness concepts and practices.**

Performance Indicators

- a. recognizes components, functions, and common disorders of the major body systems
- b. demonstrates knowledge of basic components of physical fitness (e.g., strength, endurance, flexibility) and applies principles of training
- c. applies strategies for developing a personal fitness plan based on self-assessment, goal setting, and an understanding of physiological changes that result from training
- d. analyzes the relationship between lifelong physical activity and the prevention of illness, disease, and premature death
- e. applies knowledge of principles and activities for developing and maintaining cardiorespiratory endurance, muscular strength, flexibility, and levels of body composition that promote good health

**3.7 Understand concepts and practices related to child development and care and apply knowledge of family and interpersonal relationships.**

Performance Indicators

- a. recognizes stages and characteristics of physical, cognitive, social, and emotional development during infancy, childhood, and adolescence
- b. demonstrates knowledge of children's physical, dietary, and hygienic needs (e.g., nutritional guidelines, dental care, proper washing procedures) and applies developmentally appropriate methods for promoting self-care during childhood
- c. identifies causes of common childhood accidents and health-care emergencies and applies physical care and safety guidelines for caregivers of infants, toddlers, and preschool and school-age children
- d. analyzes factors that affect decisions about whether and when to have children and recognizes ways to prepare for the responsibilities of parenthood
- e. demonstrates knowledge of family structure (e.g., extended, blended, single parent, dual career), roles and responsibilities of family members, and the functions of families in society
- f. recognizes the types and characteristics of interpersonal relationships and analyzes decision-making processes related to interpersonal relationships
- g. examines social and cultural influences on interpersonal communication and analyzes factors affecting the formation of positive relationships in the family, workplace, and community

**FIELDS 231/232/245: MULTI-SUBJECT: TEACHERS OF  
MIDDLE CHILDHOOD (GRADE 5–GRADE 9)  
ASSESSMENT FRAMEWORK**

**FIELD 245: PART THREE: ARTS AND SCIENCES**

**3.8 Understand skills and procedures related to consumer economics and personal resource management.**

Performance Indicators

- a. recognizes rights and responsibilities of consumers in various purchasing situations (e.g., rights in relation to product and service warranties and guarantees)
- b. demonstrates knowledge of types and characteristics of consumer fraud and applies procedures for seeking redress and registering consumer complaints
- c. applies knowledge of procedures for making major purchases (e.g., comparison shopping, negotiating, interpreting labels or contract terminology)
- d. analyzes considerations involved in selecting and maintaining housing and motor vehicles, obtaining credit and insurance, and making investments
- e. examines steps and considerations involved in planning and maintaining a personal or family budget and applies money management guidelines appropriate for various situations
- f. demonstrates knowledge of personal and family resources (e.g., time, skills, energy) and applies decision-making and goal-setting procedures for managing personal and family resources in various situations

**3.9 Understand basic principles of career development; apply processes and skills for seeking and maintaining employment; and demonstrate knowledge of workplace skills, behaviors, and responsibilities.**

Performance Indicators

- a. demonstrates knowledge of the relationship of personal interests, skills, and abilities to successful employment and recognizes the relationship between the changing nature of work and educational requirements
- b. recognizes factors to consider when evaluating careers and applies procedures for conducting career research
- c. demonstrates knowledge of steps involved in searching for a job and recognizes factors affecting the success of a job search (e.g., writing an effective letter of application, résumé preparation)
- d. applies skills and procedures for job interviews (e.g., personal appearance and demeanor, communicating effectively during an interview)
- e. applies knowledge of effective communication principles, work etiquette, interpersonal skills, and techniques for handling stress or conflict in the workplace
- f. recognizes rights and responsibilities in relation to employment (e.g., protection from harassment and discrimination, employer's performance expectations)