

	Test Content Categories		F	Require	d Cours	e Numb	ers		
Page   1	I. Reading and Language Arts (31%)								
	A. Curriculum: A beginning teacher understands developmentally appropriate curriculum planning for foundational skills, literature and informational texts, writing, language, and speaking and listening.								
	Knows how to sequence lessons within a curriculum								
	2. Knows how to plan for strategies to advance student understanding and to address common student misconceptions								
	3. Knows how to make connections within reading and language arts topics, across other disciplines, and in real-world contexts								
	B. Instruction: A beginning teacher understands how to design instruction that differentiates for diverse needs and how to implement developmentally appropriate instructional methods/strategies/approaches/resources to support learning in the following areas.								
	Reading foundational skills								
	a. Knows how to develop students' understanding of concepts of print								
	b. Knows strategies to develop students' phonological awareness skills (e.g., finger spelling, clapping syllables, picture sorting)								
	c. Knows strategies to develop phonic and word- analysis skills to support decoding (e.g., morphology, syllabication, word building,								



	Test Content Categories		F	Require	d Course	e Numb	ers		
	-								
Page   2	word/letter sorts, high-frequency words)								
	d. Knows strategies to develop students' fluency to support comprehension (e.g., selecting appropriate texts, modeling fluent reading, choral reading, repeated reading)								
	2. Reading literature and informational texts								
	a. Knows how to develop students' ability to comprehend literature and informational text								
	b. Knows strategies for teaching students to ask and answer questions about texts								
	c. Knows strategies and tools for teaching students to find and organize key details and main ideas and themes in a text (e.g., plays, think-alouds, graphic organizers)								
	d. Knows how to develop students' understanding of features and structures of text across genres								
	e. Knows how to develop students' understanding of point of view and how it influences the meaning of texts								
	f. Knows how to develop students' ability to distinguish among fact, opinion, and reasoned judgment								
	g. Knows how to help students integrate and compare written, visual, and oral information within and among texts and multimedia sources								
	h. Knows strategies (e.g., think-alouds, examples) to help students understand how meaning is relayed through the use of print, graphics, and digital media								



	Test Content Categories		F	Require	d Cours	e Numb	ers		
	_								
Page   3									
	i. Knows strategies and tools to help students compare and contrast texts and/or integrate information from multiple texts on the same topic								
	j. Explains how signal words can be used to clarify connections between key ideas in texts								
	k. Knows strategies to help students select appropriate texts for their reading level, purpose, and interests								
	I. Knows scaffolding strategies to support students' progress toward independent proficient reading at the high end of their text-complexity band (e.g., providing access to grade-level texts, purposeful grouping, close reading)								
	3. Writing								
	a. Knows how to develop students' writing skills by using effective approaches to writing instruction and appropriate strategies and tools								
	b. Knows how to develop students' knowledge of opinion/argument, informative/explanatory, and narrative writing and their purposes								
	c. Knows how to help students develop research- based writing skills, cite relevant textual evidence, frame research questions, and use digital tools in the writing process								
	d. Knows strategies to help students distinguish between primary and secondary sources, reliable and unreliable sources, and paraphrasing and								



	Test Content Categories		ı	Require	d Cours	e Numb	ers		
	_								
Page   4	plagiarizing								
	4. Language								
	a. Knows strategies to develop students' understanding of standard English conventions b. Knows strategies to develop students' ability to determine word meanings and develop vocabularies								
	c. Knows resources to develop students' ability to use and interpret figurative language								
	5. Speaking and listening								
	a. Knows strategies to develop students' active listening, critical thinking, and use of reasons and evidence to support claims when speaking								
	b. Knows strategies to develop students' oral presentation skills and to develop students' skill in providing constructive feedback								
	c. Knows strategies to promote students' use of multimedia for presentations								
	C. Assessment: A beginning teacher knows appropriate assessments for evaluating the effectiveness of reading and language arts instruction and student progress.								
	Knows how to design and use formative assessments to adjust instruction								
	2. Knows how to design, use, and interpret summative assessment								



	Test Content Categories		F	Require	d Cours	e Numb	ers		
	_								
Page   5	3. Knows how to recognize when misconceptions occur and strategies for reteaching								
	4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning  II. Mathematics (26%)								
	A. Curriculum: A beginning teacher understands developmentally appropriate curriculum planning for numbers and operations, algebraic thinking, geometry and measurement, and data, statistics, and probability.								
	Knows how to sequence examples within a lesson to support understanding of concepts								
	2. Knows how to sequence lessons within a curriculum								
	3. Knows how to plan for strategies to address common student misconceptions								
	4. Knows how to make connections within math topics, across other disciplines, and in real-world contexts								
	B. Instruction: A beginning teacher understands how to design instruction, purposefully incorporate standards for mathematical practices to meet diverse needs, and select developmentally appropriate instructional methods/strategies/manipulatives/models to support learning in the following areas.								
						_			



	Test Content Categories		F	Require	d Cours	e Numb	ers		
	_								
Page   6									
	Numbers and operations: natural numbers, whole numbers, integers, and rational numbers								
	a. Knows algorithms, strategies, models, and problem situations for adding, subtracting, multiplying, and dividing numbers								
	b. Knows strategies for understanding properties of operations								
	c. Knows strategies for mental math, estimation, and rounding and knows how and when to use the strategies								
	d. Knows strategies for comparing numbers								
	e. Knows strategies for counting numbers								
	f. Knows strategies for modeling relationships between decimals and whole numbers, fractions, and percents								
	g. Knows strategies for relating a fraction to division and that $ab$ means ${\it a}$ copies of $1b$								
	2. Numbers and operations: proportional relationships								
	a. Knows strategies for understanding ratios, rates, and unit rates								



Test Content Categories		F	Require	d Cours	e Numb	ers		
7 b. Knows strategies for understanding proportionality								
3. Numbers and operations: number theory								
a. Knows strategies for understanding prime numbers, composite numbers, factors, and multiples								
4. Algebraic thinking: expressions, equations, and formulas								
a. Knows strategies for writing expressions, equations, and formulas from a context								
b. Knows strategies for evaluating and symbolically manipulating expressions, equations, and formulas								
5. Algebraic thinking: linear equations and inequalities a. Knows strategies for writing an equation to								
represent a pattern								
b. Knows strategies for writing and solving linear equations and inequalities								
6. Geometry and measurement: one-, two-, and three-dimensional figures								
a. Knows strategies for using standard and nonstandard tools and appropriate units to measure								
the length, area, perimeter, surface area, and volume of figures								
b. Knows strategies for classifying figures and for comparing and contrasting figures								
c. Knows strategies for understanding the vocabulary and definitions for figures								
d. Knows strategies for using nets to represent three-dimensional figures								



	Test Content Categories		F	Require	d Course	e Numb	ers		
	-								
Page   8	e. Knows strategies for representing figures and for modeling them with shapes and solids								
	f. Knows strategies for modeling and solving real- world problems involving two- and three- dimensional figures								
	g. Knows strategies for composing, decomposing, and manipulating figures								
	7. Geometry and measurement: coordinate plane								
	a. Knows strategies for plotting points								
	8. Geometry and measurement: measurement								
	a. Knows strategies for converting measurements b. Knows strategies for representing time and								
	elapsed time								
	9. Data, statistics, and probability: measures of center								
	a. Knows strategies for finding measures of center and for determining which measure is best to use in a given situation								
	10. Data, statistics, and probability: data								
	a. Knows strategies for collecting and displaying data to answer a statistical question								
	11. Data, statistics, and probability: probability								
	a. Knows strategies for linking probability to the likelihood that an event will occur								



### Praxis<sup>®</sup> Elementary Education: Curriculum, Instruction and Assessment (5017)

		 	uiii Oi (	Reauire	d Cours	e Numb	ers		
	Test Content Categories								
Page   9	C. Assessment: A beginning teacher knows appropriate assessments to evaluate mathematical instructional effectiveness and student progress.								
	1. Knows how to design and use formative assessment to adjust instruction								
	2. Knows how to design, use, and interpret summative assessments								
	3. Knows how to recognize when misconceptions occur and strategies for reteaching								
	4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning								
	III. Science (16%)								
	A. Curriculum: A beginning teacher understands developmentally appropriate curriculum planning for science topics.								
	Knows the broad purposes of teaching science     and the relationship of concepts within science								
	2. Knows the relationship of science with concepts across other content areas and the instructional implications of those relationships								
	B. Instruction: A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional methods/strategies/ approaches/resources to support learning in the following areas.								
	1. Science concepts, inquiry, and processes								
	a. Knows how to develop students' understanding of unifying concepts and processes in science and								



	Test Content Categories	Required Course Numbers										
Page   10	provides connections between traditional scientific disciplines, systems, subsystems, models, and conservation; personal and social perspective of science; history and nature of science											
	b. Knows how to develop students' understanding of the process of scientific inquiry and the purpose of constructing ideas and explanations, asking questions and using appropriate questioning techniques, and developing testable questions and hypotheses											
	c. Knows how to develop students' understanding of how to plan, conduct, and observe simple investigations, construct explanations, communicate results, and solve problems											
	d. Knows how to develop students' understanding of how to choose the appropriate tools of science to gather data, organize and analyze information, communicate investigation results, and construct reasonable explanations											
	e. Knows how to develop students' understanding of how to select developmentally appropriate materials, equipment, texts, and technology for model building and forecasting											
	2. Life science											
	a. Knows how to develop students' understanding of the characteristics of organisms											
	b. Knows how to develop students' understanding of the life cycles of organisms											
	c. Knows how to develop students' understanding of											



	Test Content Categories		í	Require	d Cours	e Numb	ers		
Page   11	organisms and their environment								
	3. Earth and space science								
	a. Knows how to develop students' understanding of the interrelationships in Earth systems and space systems, including astronomy								
	b. Knows how to develop students' knowledge of Earth patterns, cycles, and change								
	c. Knows how to develop students' understanding of geology, hydrology, meteorology, oceanography, and soil science								
	4. Physical science								
	a. Knows how to develop students' understanding of physical and chemical changes, temperature and heat, sound, light, electricity, and magnetism								
	b. Knows how to develop students' understanding of force, motion, energy, and matter								
	5. Health								
	a. Knows how to develop students' knowledge of healthy living, growth, nutrition, safety, and wellbeing								
	b. Knows how to develop students' knowledge of communicable diseases, substance abuse, and common diseases								
	C. Assessment: A beginning teacher knows appropriate assessments to evaluate the effectiveness of science instruction and student progress.								



ı		Curricui	aiii							
	Test Content Categories		1	F	Required	d Course	e Numb	ers		
Page   12	1. Knows how to design and use formative									
	assessment to adjust instruction									
	2. Knows how to design, use, and interpret summative assessments									
	3. Knows how to select and use appropriate									
	assessments (e.g., observations, traditional,									
	standardized) to evaluate student learning									
	4. Knows how to analyze student work to guide science instruction									
	IV. Social Studies (14%)									
	A. Curriculum: A beginning teacher understands developmentally appropriate curriculum planning for the social studies topics.									
	1. Knows the broad purposes of teaching social studies and the relationship of concepts within social studies									
	2. Knows the relationship of social studies concepts across other content areas and the instructional implications of those relationships									
	B. Instruction: A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional									
	methods/strategies/ approaches/resources to support learning in the following areas.									
	1. Information processing skills									
	a. Knows how to help students locate, analyze, and synthesize information related to social studies topics and how to apply that information to solve problems and make decisions									



	Test Content Categories	Required Course Numbers											
Page   13	b. Knows how to help students select and use appropriate materials, equipment, texts, and technology in social studies (e.g., physical, topographic, political, and weather maps, globes, aerial imagery, satellite images, graphs, tables, diagrams, graphic organizers,  2. Geography												
	a. Knows how to develop students' understanding of the uses of geography and the interrelationships between human and physical systems, the environment, and society												
	b. Knows how to help students develop an understanding of states, regions, the United States, and the world												
	3. History												
	a. Knows how to develop students' understanding of the relationships between past and present												
	b. Knows how to develop students' understanding of United States history from founding to the twenty-first century as well as twentieth-century developments and transformations in the United States												
	c. Knows how to develop students' knowledge of chronological thinking, historical analysis, and interpretation												
	d. Knows how to develop students' understanding of the causes and effects of events, how to compare and contrast events, and how to hypothesize how												



	Test Content Categories	Required Course Numbers											
Page   14	the past influenced the present												
	e. Knows how to help students understand Classical civilizations (e.g., Egypt, Greece, Rome, China)												
	4. Government, civics, and economics												
	a. Knows how to develop students' understanding of basic economic concepts (e.g., market economy) and how to make economic decisions as consumers, employers, and workers												
	b. Knows how to develop students' understanding of the government's role in economics and the impact of economics on government												
	c. Knows how to develop students' understanding of democracy and politics at the federal, state, and local levels												
	d. Knows how to develop students' understanding of the structure of government and the Constitution of the United States												
	e. Knows how to develop students' understanding of citizenship												
	f. Knows how to develop students' understanding of the global marketplace and industrialization												
	5. Anthropology and sociology												
	a. Knows how to develop students' understanding of the impact of conditions and events on groups and individuals												
	b. Knows how to develop students' understanding of how people of different cultural backgrounds												



	Test Content Categories	Required Course Numbers											
Page   15	interact with their environment, self, family, neighborhoods, and communities												
	c. Knows how to develop students' understanding of interactions between different communities and the effects of human behavior in society												
	d. Knows how to develop students' understanding of the roles of communication, transportation, technology, and social organization												
	C. Assessment: A beginning teacher knows how to assess the effectiveness of social studies instruction and student progress.												
	Knows how to design and use formative     assessment to adjust instruction												
	2. Knows how to design, use, and interpret summative assessments												
	3. Knows how to recognize when misconceptions occur and strategies for reteaching												
	4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning												
	V. Art, Music, and Physical Education (13%)												
	A. Curriculum: A beginning teacher understands developmentally appropriate curriculum planning, strategies, and sequencing for art, music, and physical education.												
	1. Knows the fundamental purposes for teaching art, music, and physical education												
	Knows how to make connections within and between art, music, and physical education across other disciplines and in real-world contexts												



	Test Content Categories	Require								equired Course Numbers							
	-																
Page   16	B. Instruction: A beginning teacher understands how to design instruction to meet diverse needs and to how to implement developmentally appropriate instructional methods, techniques, strategies, approaches, and resources to support learning in the following areas.																
	1. Knows how to develop students' understanding of art and design media, techniques, and concepts, including but not limited to the elements and principles of art, visual communication and production, art history, art criticism, and aesthetics																
	2. Knows how to develop students' understanding of the elements of music (e.g., texture, harmony, melody, rhythm) and has a fundamental knowledge of music notation, terminology, and music making																
	3. Knows how to develop students' understanding of physical education concepts (e.g., exercise, physical fitness, game and sport skills, safety, locomotor patterns, body management, social discipline, healthy lifestyles)																
	4. Knows how to select and use manipulatives and developmentally appropriate materials, equipment, texts, and technology (e.g., art materials, musical instruments, physical education equipment, information from reliable sources)																
	C. Assessment: A beginning teacher understands how to assess the effectiveness of art, music, and physical education instruction and student learning.																



	Test Content Categories	Required Course Numbers										
Page   17	1. Knows how to design and use formative assessment to adjust instruction											
	2. Knows how to design, use, and interpret summative assessments											
	3. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning											