In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall meet the expectations set by the following content-specific competencies:

ENGLISH/LANGUAGE ARTS

1. **Science of Reading**	1.1 Demonstrate the knowledge of the science of reading research by understanding the following:
	● The connection between research from neuroscience, linguistics, and education
	● The importance of evidence-based practices as opposed to research-based practices
	● How the brain learns to read
	● Reading is not natural, so explicit instruction is required for reading and writing.
	● Underlying causes of reading difficulty
	o Extrinsic (environment: instructional, experiential)
	o Intrinsic (genetic: dyslexia, autism, ADHD, etc)
	● Code emphasis instruction vs. meaning emphasis instruction
	● Theoretical models of reading
	o The Simple View of Reading
	o Scarborough's Reading Rope
	o The Four Part Mental Processor
	o Ehri's Phases of Word Level Reading
	● The role of phonological processing in the reading development of individual students (e.g. English Language Learners, struggling readers through highly proficient readers)
	1.2 Demonstrate knowledge of permanent word storage by understanding the following:
	● The underlying cognitive skills necessary for developing an adequate sight word vocabulary
	● The insight that there is a direct connection between the sounds of spoken language and the letters in the written words that is central to both phonic decoding and sight-word learning (alphabetic principle)
	● Strategies for promoting the understanding of the alphabetic principle
	● Strategies for developing orthographic mapping in order to increase sight word learning
2. **Concepts of Print**	2.1 Demonstrate knowledge of concepts of print by understanding the following:
	● Development of the understanding that print carries meaning

	● Strategies for promoting awareness of the relationship between spoken and written language ● The role of environmental print in developing print awareness ● Development of book handling skills ● Strategies for promoting and understanding of the directionality of print ● Techniques for promoting the ability to track print in connected text
3. Phonology	3.1 Demonstrate knowledge of the speech sound system of language, including the rules and patterns by which phonemes are combined into words and phrases by ● Understanding the rationale for/identify, pronounce, classify and compare all the consonant phonemes and all the vowel phonemes of English. ● Demonstrating an understanding of how the articulation of the phonemes affects decoding and encoding 3.2 Demonstrate knowledge of the role of phonological awareness in reading development by understanding the following: ● Continuum of phonological awareness skills (Distinguishing spoken words, syllables, onsets/rimes, and phonemes) ● Systematic, explicit, and age appropriate strategies to teach each skill of the phonological continuum to automaticity 3.3 Demonstrate knowledge of the role of phonemic awareness in reading development by understanding the following: ● Continuum of phonemic awareness skills (rhyming, segmenting, blending, adding, deleting, substituting) ● Systematic, explicit and age appropriate ways to teach phonemic awareness to automaticity in each skill of the phonemic awareness continuum. ● The distinction between phonological awareness and phonemic awareness 3.4 Know and understand the difference between phonemic awareness and phonics skills
4. Phonics and Word Study	4.1 Demonstrate knowledge of the role of phonics in promoting reading development by understanding the following: ● Development of alphabetic knowledge in individual students (e.g. English Language Learners, struggling readers through highly proficient readers) ● Systematic and explicit teaching of the following to automaticity:

- o Letter recognition and letter formation
- o Letter-sound correspondences
- o Six syllable types
- o Syllable division patterns
- Systematic and explicit teaching of phonics (decoding and encoding)
- The relationship between decoding and encoding
- How to teach irregular words (encoding and decoding)
- The role of phonics in developing rapid, automatic word recognition
- The interrelationship between letter-sound correspondence and beginning decoding
- Methods for promoting and assessing the use of phonics generalizations to decode words with practice in connected text
- Use of semantic and syntactic clues to help decode words
- The relationship between oral vocabulary and the process of decoding written words
- Specific terminology associated with phonics

4.2 Demonstrate knowledge of the role of phonics in promoting reading fluency by understanding the following:
- Strategies for promoting automaticity and fluency (i.e. accuracy, rate, and prosody)
- The role of automaticity in developing reading fluency
- Development of phonics skills and fluency in individual students (e.g. English Language Learners, struggling readers through highly proficient readers)
- Interrelationships between decoding, fluency, and reading comprehension

4.3 Demonstrate knowledge of word analysis skills and strategies by understanding the following:
- Development of word analysis skills and strategies in addition to phonics, including structural analysis
- Interrelationships between word analysis skills, fluency, and reading comprehension
- Systematic and explicit teaching of word analysis skills
- Identification of common morphemes
- Recognition of common prefixes and suffixes and their meanings
- Knowledge of Latin and Greek roots that form English words
- Use of syllabication as a word identification strategy
- Analysis of syllables and morphemes in relation to spelling patterns
- Techniques for identifying compound words

	● Identification of homographs ● Use of context clues (semantic, syntactic) to help identify words and to verify the pronunciation and meaning of words ● Development of word analysis skills and fluency in individual students (e.g. English Language Learners, struggling readers through highly proficient readers)
5. Development of Reading Comprehension	5.1 Demonstrate knowledge of vocabulary development by understanding the following: ● The relationship between oral and written vocabulary development and reading comprehension ● The role of systematic, non contextual vocabulary strategies and contextual vocabulary strategies ● The relationship between oral vocabulary and the process of identifying and understanding written words ● Strategies for promoting oral language development and listening comprehension ● Knowledge of common sayings, proverbs, and idioms ● Knowledge of foreign words and abbreviations commonly used in English ● Criteria for selecting vocabulary words ● Strategies for clarifying and extending a reader's understanding of unfamiliar words encountered in connected text ● Strategies for promoting comprehension across the curriculum by expanding knowledge of academic language, including conventions of standard English grammar and usage, differences between the conventions of spoken and written standard English, general academic vocabulary, and content-area vocabulary ● The importance of frequent, extensive, varied reading experiences in the development of academic language and vocabulary ● The development of academic language and vocabulary knowledge and skills in individual students (e.g. English Language Learners, struggling readers through highly proficient readers) 5.2 Demonstrate knowledge of how to apply reading comprehension skills and strategies to imaginative/literary texts and informational/expository texts by understanding the following: ● Reading as a process to construct meaning ● Reading comprehension and analysis skills ● Levels of reading comprehension (i.e., literal, inferential, and evaluative) and strategies for promoting comprehension of texts at all three levels ● Strategies for promoting close reading ● Development of literary response skills

	● Development of literary analysis skills ● Use of comprehension strategies to support effective reading ● Use of oral language activities to promote comprehension ● The role of reading fluency in facilitating comprehension ● Use of writing activities to promote literary response, analysis, and comprehension ● Development of reading comprehension skills and strategies of individual students (e.g., English Language Learners, struggling readers through highly proficient readers
6. Reading Assessment / Instruction	6.1 Demonstrate knowledge of formal and informal methods for assessing reading development by understanding the following: ● The use of data and ongoing reading assessment to adjust instruction to meet students' reading needs ● The characteristic and uses of standardized criterion-referenced and norm-referenced tests to assess reading development and identify reading difficulties ● Concepts of validity, reliability, and bias in testing ● The characteristics and uses of formal and informal reading-related assessments ● Characteristics and uses of group versus individual reading assessments ● Techniques for assessing particular reading skills ● Awareness of the challenges and supports in a text ● Techniques for determining students' independent, instructional, and frustration reading levels ● Assessment of the reading development of individual students (e.g., English Language Learners, struggling readers through highly proficient readers) 6.2 Demonstrate knowledge of multiple approaches to reading instruction by understanding the following: ● Knowledge of significant and current theories, approaches, evidence-based practices, and programs for developing foundational reading skills and reading comprehension. ● Strategies for planning, organizing, managing, and differentiating reading instruction to support the reading development of all students ● Adjustment of reading instruction based on ongoing assessment ● Instructional strategies for promoting development of particular reading skills ● The importance of close reading and rereading of well crafted, content-and idea-rich texts in reading development ● Strategies for evaluating and sequencing texts for reading instruction according to text complexity

	● The importance of balancing students' exposure to and reading of literary and informational texts ● The uses of large-group, small group, and individualized reading instruction ● Use of decodable texts to provide multiple opportunities to apply phonic skills. ● Strategies for selecting and using meaningful reading materials at appropriate levels of difficulty ● Creation of an environment that promotes a culture of reading ● Strategies for promoting independent reading in the classroom and at home ● Uses of instructional technologies to promote reading development ● Awareness of strategies and resources for supporting individual students (e.g., English Language Learners, struggling readers through highly proficient readers)
7. Writing AR ELA Standards: Anchor Standards for Writing and Language FOR Praxis (5002) IDA-KPS	7.1 Demonstrate understanding of the characteristics of common types of writing by • Distinguishing among common types of writing (e.g. opinion/argument, informative/explanatory, narrative) • Identifying the purpose, key components, and subgenres of each common type of writing • Evaluating the effectiveness of writing samples of each type 7.2 Demonstrate understanding of the characteristics of effective writing by • Evaluating the appropriateness of a particular piece of writing for a specific task, purpose, and audience • Evaluating the development, organization, or style of a piece of writing • Identifying appropriate revisions to strengthen a piece of writing • Identifying the interrelationships among planning, revising, and editing in the process of writing 7.3 Demonstrate understanding of the developmental stages of writing (e.g., picture, scribble) by identifying the grade-appropriate continuum of student writing 7.4 Identify the characteristics and purposes of a variety of digital tools used for producing and publishing writing and for interacting with others. 7.5 Demonstrate understanding of the research process by • Identifying the steps in the research process • Distinguishing between primary and secondary sources and their uses • Distinguishing between reliable and unreliable sources

	• Distinguishing between paraphrasing and plagiarizing
	• Knowing how to locate credible print and digital sources, locate information within the sources, and cite the sources
	7.6 Demonstrate understanding of the conventions of standard English grammar, usage, mechanics, and spelling by
	    • Explaining the function of different parts of speech
	    • Correcting errors in usage, mechanics, and spelling
	    • Identifying examples of different sentence types (e.g., simple, compound, compound-complex)
	    • Identifying how varieties of English (e.g., dialects, registers) used in stories, dramas, or poems support the overall meaning
	    • Identifying relevant features of language such as word choice, order, and punctuation
	7.7 Know/apply in practice considerations for research-based principles for teaching letter formation, both manuscript and cursive

8. Speaking and Listening
 	
Arkansas ELA Standards: SL K-6. 1-6
 	
Praxis (5002)
	8.1 Demonstrate understanding of the characteristics of effective collaboration to promote comprehension by
	    • Identifying techniques to communicate for a variety of purposes with diverse partners
	    • Identifying the characteristics of active listening
	8.2 Present claims and findings, emphasizing primary points in a focused, coherent manner with pertinent descriptions, facts, details, and examples
	8.3 Identify elements of engaging oral presentations (e.g. volume, articulation, awareness of audience)
	8.4 Describe precisely a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not
	8.5 Include multimedia components (e.g. graphics, images, music, sound) and visual displays in presentations to clarify information
	8.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation

In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall be able to meet the expectations set by the following content-specific competencies:

MATH

1. **Mathematics Concepts, Practices, and Curriculum** Praxis (5003) AMTE 2017	1.1 Demonstrate understanding of numbers and operations including • The place value system • Operations and properties of rational numbers • Proportional relationships and percents • Basic concepts of number theory • Strategies to determine the reasonableness of results 1.2 Demonstrate understanding of algebraic thinking including • How to evaluate and manipulate algebraic expressions, equations, and formulas • The meanings of the solutions to linear equations and inequalities • How to recognize and represent patterns (e.g., number, shape) 1.3 Demonstrate understanding of geometry and measurement, data, statistics, and probability including • How to classify one-, two-, and three-dimensional figures • How to solve problems involving perimeter, area, surface area, and volume • The components of the coordinate plane and how to graph ordered pairs on the plane • How to solve problems involving measurement • Basic statistical concepts • How to represent and interpret data presented in various forms • How to interpret the probability of events 1.4 Understand and solve problems in more than one way, explain meanings of key concepts, and explain the mathematical rationales underlying key procedures 1.5 Demonstrate a solid and flexible knowledge of mathematical processes and practices by • Using mathematical language with care and precision • Explaining mathematical thinking using grade-appropriate concepts, procedures, and language, including grade-appropriate definitions and interpretations for key mathematical concepts • Applying mathematical knowledge to real-world situations by using mathematical modeling to solve problems appropriate for K-6 students • Using representations and technological tools appropriate for K-6 mathematics content • Regarding doing mathematics as a sense-making activity that promotes perseverance, problem posing, and problem solving

- Recognizing processes and practices when they emerge in their mathematical thinking and highlight these actions and behaviors when they observe them in others
- Distinguishing intricacies among the various processes and practices and seeing the interrelationships among the processes and practices
- Understanding that mathematics is a human endeavor that is practiced in and out of school, across many facets of life
- E0xhibiting awareness that algorithms considered as standard in the United States differ from algorithms used in other countries and that some alternative algorithms have different, desirable properties that make them worth knowing

1.6 Exhibit productive mathematical dispositions such as
- Expecting mathematics to be sensible, useful, and worthwhile for beginning teachers and others and believing that all people are capable of thinking mathematically and are able to solve sophisticated mathematic problems with effort
- Knowing that one's success in mathematics depends on a productive disposition toward the subject and on hard work
- Believing that requisite characteristics of high-quality teaching of mathematics include a commitment to sense making in mathematical thinking, teaching, and learning and to developing habits of mind, including curiosity, imagination, inventiveness, risk-taking, and persistence

1.7 Analyze the mathematical content of curriculum by
- Reading, analyzing, interpreting, and enacting mathematics curricula, content trajectories, standards documents, and assessment frameworks for grades K-6
- Exhibiting awareness that the mathematics taught is based on a variety of, often nested, documents
- Knowing that connections exist among standards, curriculum documents, instructional materials, and assessment frameworks and analyzing these guides to inform teaching
- Analyzing instructional resources, including those provide by textbook publishers and those available from sources online, to determine whether these resources fully address the content expectations described in standards and curriculum documents
- Deciding whether to replace or adapt materials to better address the content and process expectations

- Realizing that in addition to the curriculum and standards they are required to teach, other resources can support their efforts to design rigorous, coherent mathematics instruction (e.g., learning or standards progressions, developmental progressions or learning trajectories)
- Understanding the content within these other resources and being capable of discussing them with colleagues, administrators, and families of their students in ways that make sense to these audiences
- Making decisions about the sequencing and time required to teach the content in depth as well as to make important connections among the mathematics taught in the grades or units before and after what they are teaching

1.8 Analyze different approaches to mathematical work and respond appropriately by

- Analyzing both written and oral mathematical productions related to key mathematical ideas and look for and identify sensible mathematical reasoning, even when that reasoning may be atypical or different from their own
- Valuing varied approaches to solving a problem, recognizing that engaging in mathematics is more than finding an answer
- Making mathematical connections among these approaches to clarify underlying mathematical concepts
- Recognizing the importance of context and applications in uses of mathematics and statistics
- Making connections across disciplines in ways that illuminate mathematical ideas

1.9 Exhibit proficiency with tools and technology designed to support mathematical reasoning and sense making, both in doing mathematics themselves and in supporting student learning of mathematics by

- Using both digital tools and physical manipulatives for solving mathematical problems and as a means of enhancing or illuminating mathematical and statistical concepts
- Knowing when and how to use physical manipulatives to explore mathematical and statistical ideas and to build conceptual understanding of these
- Knowing that physical and digital simulations are critical for understanding key statistical concepts
- Using virtual manipulatives, interactive electronic depictions of physical manipulatives, and knowing how these can support sophisticated explorations of mathematical concepts
- Recognizing the fast rate at which technologies emerge and committing to staying abreast of new tools, analyzing their potential and limitations for students' mathematics

	learning
2. Pedagogical Knowledge and Practices for Teaching Mathematics AMTE 2017	2.1 Structure learning opportunities and use teaching practices that provide access, support, and challenge in learning rigorous mathematics to advance the learning of every student by • Embracing and building on students' current mathematical ideas and on students' ways of knowing and learning • Developing students' identities and agency so that students can see mathematics as components of their cultures and see themselves in the mathematics • Requiring clear and coherent mathematical goals for students' learning, expectations for the collective work of students in the classroom, effective methods of supporting the learning of mathematics by each student, and provision of appropriate tools and resources targeted to students' specific needs • Fostering growth mindsets among students about learning mathematics and persistently countering manifestations of fixed mindsets (e.g., that some people are good at mathematics and others are not) 2.2 Attend to a multitude of factors to design mathematical learning opportunities for students, including content, students' learning needs, students' strengths, task selection, and the results of formative and summative assessments by • Recognizing the importance of having clear understandings of the mathematics content and mathematics learning goals for each unit and lesson as well as how these particular goals fit within a developmental progression of student learning • Articulating and clarifying mathematics learning goals during the planning process • Striving to design classroom environments in which students have opportunities to communicate their thinking, listen to the thinking of others, connect mathematics to a variety of contexts, and make connections across mathematical ideas and subject areas • Planning purposeful and meaningful questions to probe student thinking, make the mathematics visible for discussion, and encourage reflection and justification • Selecting meaningful tasks to motivate student learning, develop new mathematical knowledge and build connections between conceptual and procedural understanding • Incorporating inclusive and equity-based teaching practices 2.3 Use a core set of pedagogical practices that are effective for

	developing students' meaningful learning of mathematics
	2.4 Analyze teaching practice by eliciting and using evidence of student learning and engagement by • Analyzing the formative assessments used in a lesson to determine both student conceptions and future instruction • Recognizing that the processes of data collection, analysis, and reflection and the corresponding revision to classroom practices are systematic and continuous and grow in sophistication with teaching experience • Seeking out collaborators or critical friends to observe one another's teaching, examine students' work samples as a team, and, in concert, consider how particular teaching moves supported or inhibited student understanding and next instructional steps • Seeking collaboration with other education professionals, parents, caregivers, and community partners to provide the best mathematics learning opportunities for every student
3. Students as Learners of Mathematics AMTE 2017	3.1 Anticipate and attend to students' mathematical thinking and mathematical learning progressions by • Developing strong understandings of students' mathematical thinking in well-defined content domain(s) (e.g., within number and operations) • Committing to, and knowing how to, continue learning about students' mathematical thinking (e.g., by listening to children and their families, through continued education and professional learning, by using print or online research/resources) 3.2 Understand and recognize mathematical practices within what students say and do across many mathematical content domains, with in-depth knowledge of how students use mathematical practices in particular content domains 3.3 Know key facets of students' mathematical dispositions and sensitize to the ways in which dispositions may affect students' engagement in mathematics
4. Social Contexts of Mathematics Teaching and Learning AMTE 2017	4.1 Recognize the difference between access to and advancement in mathematics learning and work to provide access and advancement for every student 4.2 Recognize that the role of a mathematics teacher is to cultivate positive mathematical identities with their students 4.3 Identify and implement practices that draw on students' mathematical, cultural, and linguistic resources/strengths and challenge policies and practices grounded in deficit-based thinking 4.4 Be knowledgeable about, and accountable for, enacting ethical practices that enable beginning teachers to advocate for themselves and to challenge the status quo on behalf of their students

In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall be able to meet the expectations set by the following content-specific competencies:

SCIENCE

1**. Fundamental understanding of the integration of STEM (science, technology, engineering, and mathematics)** AR K-12 SS NGSS NRC (2013) NRC Framework	1.1 Understand and model key concepts of science, technology, engineering and mathematics 1.2 Develop and deliver STEM-integrated, student-centered lessons and lab investigations taking into account factors such as safety measures, K-6 classroom dynamics, problem solving, and project-based learning strategies, etc. which integrate grade-appropriate standards and practices 1.3 Understand and apply the engineering design process used to solve real-world problems in K-6 lessons 1.4 Collect, evaluate, synthesize, and share real world data 1.5 Apply STEM principles toward solving human and environmental problems; work in collaborative design teams to meet given criteria to solve design problems 1.6 Utilize vocabulary, primary concepts, definitions, and models applicable to scientific investigations and engineering and design challenges 1.7 Develop and deliver STEM lesson assessments (formative and summative) 1.8 Recognize how an integrated approach can enrich the learning environment and build connections between STEM content areas 1.9 Understand and appreciate the nature of science and scientific inquiry through solving real-world problems 1.10 Share, model, and practice strategies to support the integration of STEM areas with the emphasis in the K-6 classroom
2. Anchoring Instruction in Phenomena National Academies Press (2017)	2.1 Engage students in active science thinking 2.2 Help students make connections and understand how and why science ideas are important 2.3 Identify phenomena that describe events or facts that can be observed, unusual or not 2.4 Engage students in making sense of novel phenomena to gain conceptual understanding of what they are learning and what they observe in the world

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<td>2.5 Elicit students' natural curiosity about something that can be explained scientifically</td>
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<td>2.6 Develop a range of activities that allow students to develop three-dimensional understanding of the core ideas and crosscutting concepts while using science and engineering skills</td>
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3. Fundamental understanding of the vision for K-6 science education: scientific and engineering practices, cross cutting concepts, and core ideas

AR K-12 SS

NGSS

NRC Framework

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3.1 Demonstrate a command of the <u>vision</u> for K-12 science education- "… students, over multiple years of school, actively engage in scientific and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields."

3.2 Demonstrate a command of the eight scientific and engineering practices identified on the NRC Framework listed below:
- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

3.3 Demonstrate an understanding through the application of the 7 crosscutting concepts (Dimension 2) that should be reinforced by repeated use in instruction across the disciplinary core ideas (Dimension 3) with
- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter: Flows, cycles, and
- conservation
- Structure and function
- Stability and change

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3.4 Demonstrate an understanding of the disciplinary core ideas in physical sciences, life sciences, and earth and space sciences in the NRC Framework

3.5 Identify and implement lessons/units that integrate the scientific and engineering practices and crosscutting concepts with each of the core ideas as specified in the performance expectations of the NRC Framework

3.6 Demonstrate content and science investigation teaching methods for K-6 in the particular the core ideas of
Physical Sciences;
    PS 1: Matter and its interactions
    PS 2: Motion and stability: Forces and interactions
    PS 3: Energy
    PS4:   Waves and their applications in technologies for information transfer
  Life Sciences
    LS 1: From molecules to organisms: Structures and processes
    LS 2: Ecosystems: Interactions, energy, and dynamics
    LS 3:   Heredity: Inheritance and variation of traits
    LS 4: Biological evolution: Unity and diversity
  Earth and Space Sciences
    ESS 1: Earth's place in the universe
    ESS 2: Earth's systems
    ESS 3: Earth and human activity
  Engineering, Technology, and the Applications of Science
    ETS 1: Engineering design
    ETS 2: Links among engineering, technology, science, and society

3.7 Demonstrate a command of the implementation of the Common Core State Standards for math and English/language arts and ISTE Technology Standards for Teachers as it supports the NRC Framework

3.8 Design and conduct science investigations in at least one if not all of the disciplinary core ideas with attention to gathering and interpreting scientific data

3.9 Demonstrate a command of diverse teaching strategies for

	reading and writing informational texts like those read and written by scientists
4. Principles of Life Sciences AR K-12 SS NGSS NRC Framework Praxis (5005)	4.1 Demonstrate a deep understanding following active investigations from molecules to organisms including • Structure and Function • Growth and Development of Organisms • Organization for Matter and Energy Flow in Organisms • Information Processing 4.2 Demonstrate a deep understanding following active investigations of ecosystems including • Interdependent Relationships in Ecosystems • Cycles of Matter and Energy Transfer in Ecosystems • Ecosystem Dynamics, Functioning, and Resilience • Social Interactions and Group Behavior 4.3 Demonstrate a deep understanding following active investigations of heredity including • Inheritance of Traits • Variation of Traits 4.4 Demonstrate a deep understanding following active investigations of biological evolution including • Evidence of Common Ancestry and Diversity • Natural Selection • Adaptation • Biodiversity and Humans
5. Principles of Physical Sciences AR K-12 SS NGSS NRC Framework Praxis (5005)	5.1 Demonstrate a deep understanding following active investigations in the principles of matter and its interactions including • Structure and Properties of Matter • Chemical Reactions • Nuclear Processes 5.2 Demonstrate a deep understanding following active investigations in the principles of motion and stability including • Forces and Motion

	• Types of Interactions • Stability and Instability in Physical Systems 5.3 Demonstrate a deep understanding following active investigations in the principles of energy including • Definitions of Energy • Conservation of Energy and Energy Transfer • Relationship Between Energy and Forces • Energy in Chemical Processes and Everyday Life 5.4 Demonstrate a deep understanding following active investigations in the principles of waves and their applications in technologies for information transfer including • Wave Properties • Electromagnetic Radiation • Information Technologies and Instrumentation
6. Principles of Earth and Space Sciences AR K-12 SS NGSS NRC Framework Praxis (5005)	6.1 Demonstrate a deep understanding following active investigations in the principles of earth's place in the universe including • The Universe and Its Stars • Earth and the Solar System • The History of Planet Earth 6.2 Demonstrate a deep understanding following active investigations in the principles of earth's systems including • Earth Materials and Systems • Plate Tectonics and Large-Scale System Interactions • The Roles of Water in Earth's Surface Processes • Weather and Climate • Biogeology 6.3 Demonstrate a deep understanding following active investigations in the principles of earth and human activity including • Natural Resources • Natural Hazards • Human Impacts on Earth Systems • Global Climate Change

7. Principles of Engineering Design, Technology, and Applications of Science AR K-12 SS NGSS NRC Framework	7.1 Demonstrate a deep understanding following active investigations in the principles of the engineering design cycle in the context of K-6 science including • Defining and Delimiting an Engineering Problem • Developing Possible Solutions • Optimizing the Design Solution 7.2 Demonstrate a deep understanding following active investigations in the principles of links among engineering, technology, science, and society in the context of K-6 science including • Interdependence of Science, Engineering, and Technology • Influence of Engineering, Technology, and Science on Society and the Natural World
8. Safety NSTA	8.1 Design activities in a K-6 classroom that demonstrate the safe and proper techniques for the preparation, storage, dispensing, supervision, and disposal of all materials used within their subject area science instruction 8.2 Design and demonstrate activities in a K-6 classroom that demonstrate an ability to implement emergency procedures and the maintenance of safety equipment, policies and procedures that comply with established state and/or national guidelines 8.3 Ensure safe science activities appropriate for the abilities of all students 8.4 Design and demonstrate activities in a K-6 classroom that demonstrate ethical decision-making with respect to the treatment of all living organisms in and out of the classroom 8.5 Emphasize safe, humane, and ethical treatment of animals and comply with the legal restrictions on the collection, keeping, and use of living organisms
9. Disciplinary Literacy AR DLS	<u>Reading Standards for Literacy in Science and Technical Subjects, Grade 6</u> 9.1 Read scientific and technical texts closely to determine what the text says explicitly and to make logical inferences from it, while determining central ideas or themes and analyzing development by: • Citing specific textual evidence to support analysis of science and technical texts • Determining the central ideas or conclusions of a text

o Providing an a accurate summary of the text distinct from prior knowledge or opinions

- Following precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks

9.2 Interpret words and phrases as they are used in scientific and technical texts, while analyzing the structure of such texts by:

- Determining the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context
- Analyzing the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
- Analyzing the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text

9.3 Integrate knowledge and ideas by

- Integrating quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
- Distinguishing among facts, reasoned judgement based on research findings, and speculation in a text
- Comparing and contrasting the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic

9.4 Complete a text complexity analysis using all three text complexity measures: quantitative, qualitative, and reader and task

Writing Standards for Literacy in Science and Technical Subjects, Grade 6

9.5 Write arguments focused on discipline-specific content by

- Introducing claim(s) about a topic or issue, acknowledging and distinguishing the claim(s) from alternate or opposing claims, and organizing the reasons and evidence logically
- Supporting claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources

- Using words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence
- Establishing and maintaining a formal style
- Providing a concluding statement or section that follows from and supports the argument presented

9.6 Write informative/explanatory texts, including scientific procedures/experiments or technical processes by:

- Introducing a topic clearly, previewing what is to follow; organizing ideas, concepts, and information into broader categories as appropriate to achieving purpose; including formatting, graphics, and multimedia when useful to aiding comprehension
- Developing the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples
- Using appropriate and varied transitions to create cohesion and clarifying the relationships among ideas and concepts
- Using precise language and domain-specific vocabulary to inform about or explain the topic
- Establishing and maintaining a formal style and objective tone
- Providing a concluding statement or section that follows from and supports the information or explanation presented

9.7 Produce and distribute writing by:

- Producing clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
- Developing and strengthening writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed
- Using technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

9.8 Use research to build and present knowledge by

- Conducting short research projects to answer a question (including a self-generated question), drawing on several sources, and generating additional related, focused

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questions that allow for multiple avenues of exploration
- Gathering relevant information from multiple print and digital sources while using search terms effectively, assessing the credibility and accuracy of each source, quoting or paraphrasing the data and conclusions of others while avoiding plagiarism, and following a standard format for citation
- Drawing evidence from informational texts to support analysis, reflection, and research

9.9 Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
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In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall be able to meet the expectations set by the following content-specific competencies:

SOCIAL STUDIES

1. **Content Knowledge**	1.1 Demonstrate knowledge of United States History, Government, and Citizenship including
Praxis (5004) NCSS 2017	• European exploration and colonization in United States history and growth and expansion of the United States
	• The American Revolution and the founding of the nation in United States history
	• The major events and developments in United States history from founding to present (e.g., westward expansion, industrialization, Great Depression)
	• Twentieth-century developments and transformations in the United States (e.g., assembly line, space age)
	• Historical thinking skills (e.g., chronological thinking, historical comprehension, historical analysis and interpretation, historical research, causal relationships, change over time, contextualization)
	• The nature, purpose, and forms (e.g. federal, state, local) of government
	• Key documents and speeches in the history of the United States (e.g., United States Constitution, Declaration of Independence, Bill of Rights, Gettysburg Address)
	• The rights and responsibilities of citizenship in a democracy
	1.2 Demonstrate knowledge of Geography, Anthropology, and Sociology including
	• World and regional geography (e.g., spatial terms, places, regions)
	• Geographic tools and technologies (e.g., maps, globes, digital technologies, GIS)
	• The interaction of physical and human systems (e.g., how humans change the environment, how the environment changes humans, importance of natural and human resources)
	• The uses of geography (e.g., apply geography to interpret past, to interpret present, to plan for future)
	• How people of different cultural backgrounds interact with their environment, family, neighborhoods, and communities
	1.3 Demonstrate knowledge of World History and Economics including
	• Major contributions of early and classical civilizations (e.g., Mesopotamia, China, Gupta, Egypt, Greece, Rome)
	• Twentieth-century developments and transformations in world history

	- Importance of historical periods, people, events, documents, and patterns of change within and across cultures - Importance of cross cultural unity and diversity within and across groups - Key terms and basic concepts of economics (e.g., supply and demand, scarcity and choice, money and resources, factors of production) - Various roles and types of financial institutions - How economics affects population, resources, and technology - The government's role in economics and the impact of economics on government 1.4 Demonstrate understanding of disciplinary inquiry in civics, economics, geography, history, and the social/behavioral sciences 1.5 Demonstrate understanding of disciplinary facts, concepts, tools, and thinking skills in civics, economics, geography, history, and the social/behavioral sciences
2. Arkansas History ADE Arkansas History	2.1 Analyze geographic attributes of Arkansas and how the geography of Arkansas influences the social, political, and economic development of the state 2.2 Analyze the economic impact of Arkansas nationally and globally 2.3 Analyze the government and politics in Arkansas and the influence of government and politics on social issues 2.4 Examine the impact of historical events and people on the development of Arkansas
3. Application of Content Through Planning NCSS 2017	3.1 Plan learning sequences that demonstrate social studies knowledge aligned with the C3 Framework, state-required content standards, and theory and research 3.2 Plan social studies inquiries which facilitate acquisition of disciplinary concepts, tools, literacy and research skills, and use of technology. 3.3 Plan social studies instruction in which students demonstrate disciplinary knowledge and civic engagement in a variety of ways 3.4 Plan learning sequences that use technology
4. Design and Implementation of Instruction and Assessment NCSS 2017	4.1 Design and implement a range of authentic and formative assessments that measure learners' mastery of disciplinary knowledge, disciplinary literacies, inquiry, civic competence, and demonstrate alignment with state-required content standards 4.2 Design and implement learning experiences and inquiries that engage learners in disciplinary knowledge, utilizing social studies skills and tools, and demonstrating alignment with state-required content standards 4.3 Use theory and research to implement a variety of instructional practices, including inquiry and formative and authentic assessments featuring disciplinary knowledge, skills, tools and civic competence 4.4 Exhibit data literacy by using formative assessment data to guide instructional decision-making and reflect on student learning outcomes related to disciplinary knowledge, inquiry, and civic competence

	4.5 Engage learners in self-assessment practices that support individualized learning outcomes related to disciplinary knowledge, inquiry, and civic competence
5. Social Studies Learners and Learning NCSS 2017	5.1 Use knowledge of learners' socio-cultural assets, learning demands, and individual identities to plan and implement relevant and responsive pedagogy that ensures equitable learning opportunities in social studies 5.2 Use knowledge of theory and research to plan and implement instruction and assessment that is relevant and responsive to learners' socio-cultural assets, learning demands, and individual identities 5.3 Engage learners in ethical reasoning to deliberate social, political, and economic issues, communicate conclusions, and take informed action toward achieving a more inclusive and equitable society 5.4 Select, create, and engage learners with a variety of social studies instructional strategies, disciplinary sources and contemporary technologies, consistent with current theory and research about student learning. 5.5 Facilitate collaborative, interdisciplinary learning environments in which learners use disciplinary facts, concepts, and tools, engage in disciplinary inquiry, and create disciplinary forms of representation.
6. Professional Responsibility and Informed Action NCSS 2017	6.1 Use theory and research to continually improve social studies knowledge, inquiry skills, and civic dispositions, and adapt practice to meet the needs of each learner 6.2 Take informed action in schools and/or communities and serve as an advocate for learners, the teaching profession, and/or social studies
7. Disciplinary Literacy AR DLS	Reading Standards for Literacy in History/Social Studies, Grade 6 7.1 Read historical/social studies texts closely to determine what the text says explicitly and to make logical inferences from it, while determining central ideas or themes and analyzing development by • Citing specific textual evidence to support analysis of primary and secondary sources • Determining the central ideas or information of a primary or secondary source; providing an accurate summary of the source distinct from prior knowledge or opinions • Identifying key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes a law, how interest rates are raised or lowered) 7.2 Interpret words and phrases as they are used in a historical/social studies texts, while analyzing the structure of such texts by:

- Determining the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies
- Describing how a text presents information (e.g., sequentially, comparatively, causally)
- Identifying aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts)

7.3 Integrate knowledge and ideas by:
- Integrating visual information (e.g., in charts, graphs, photographs, videos, maps) with other information in print and digital texts
- Distinguishing among fact, opinion, and reasoned judgement in a text
- Analyzing the relationship between a primary and secondary source on the same topic

7.4 Complete a text complexity analysis using all three text complexity measures: quantitative, qualitative, and reader and task

Writing Standards for Literacy in History/Social Studies, Grade 6

7.5 Write arguments focused on discipline-specific content by
- Introducing claim(s) about a topic or issue, acknowledging and distinguishing the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically
- Supporting claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources
- Using words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence
- Establishing and maintaining a formal style
- Providing a concluding statement or section that follows from and supports the argument presented

7.6 Write informative/explanatory texts, such as the narration of historical events by
- Introducing a topic clearly, previewing what is to follow; organizing ideas, concepts, and information into broader categories as appropriate to achieving purpose; including formatting (e.g. headings), graphics (e.g., charts and tables), and multimedia when useful to aiding comprehension
- Developing the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples
- Using appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts
- Using precise language and domain-specific vocabulary to inform about or explain the topic
- Establishing and maintaining a formal style and objective tone
- Providing a concluding statement or section that follows from and supports the information or explanation presented

7.7 Produce and distribute writing by:
- Producing clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
- Developing and strengthening writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed
- Using technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

7.8 Use research to build and present knowledge by
- Conducting short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
- Gathering relevant information from multiple print and digital sources, using search terms effectively; assessing the credibility and accuracy of each source; quoting or paraphrasing the data and conclusions of other while avoiding plagiarism and following a standard format for citation
- Drawing evidence from information to support analysis, reflection, and research

7.9 Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences

In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall be able to meet the expectations set by the following content-specific competencies:

PHYSICAL EDUCATION

1. Training and Instruction ADE Rules 2016	1.1 Knowledge and understanding of how to improve the health of Arkansas students
	1.2 Ability to increase knowledge about the health benefits of physical activity and exercise
	1.3 Ability to develop student behavioral and motor skills that promote a lifelong commitment to healthy physical activity
	1.4 Promote health-focused activity among children and adolescents
	1.5 Encourage students to participate in physical activity outside of physical education

SPECIAL EDUCATION

1. Foundations of Special Education and Professional Responsibilities Praxis 5354	1.1 Knowledge of federal definitions related to special education
	1.2 Knowledge of the federal requirements for pre-referral, referral, and identification
	1.3 Knowledge of the federal safeguards of the rights of stakeholders
	1.4 Knowledge of the components of a legally defensible individualized education program
	1.5 Knowledge of major legislation related to special education
	1.6 Knowledge of the roles and responsibilities of the special education teacher
	1.7 Knowledge of the roles and responsibilities of the general education teacher in relation to special education
	1.8 Knowledge of the roles and responsibilities of other professionals who deliver special education services
	1.9 Ability to understand the strengths and limitations of various collaborative approaches
	1.10 Ability to communicate with stakeholders
	Knowledge of potential bias issues that may impact teaching and interactions with students and their families

In addition to the Arkansas Teaching Standards, the Elementary K-6 teacher shall be able to meet the expectations set by the following content-specific competencies:

COMPUTER SCIENCE

1. Computing Concepts AR CSS K-8	1.1 Demonstrate understanding of computational thinking and problem solving by • Analyzing problem solving strategies • Analyzing connections between elements of mathematics and computer science • Solving problems cooperatively and collaboratively 1.2 Demonstrate understanding of data and information by • Analyzing various ways in which data is represented Collecting, arranging, and representing data • Interpreting and analyzing data and information 1.3 Demonstrate understanding of algorithms and computer programs by • Creating, evaluating, and modifying algorithms • Creating computer programs to solve problems 1.4 Demonstrate understanding of computers and communications by • Analyzing the utilization of computers • Utilizing appropriate digital tools for various applications • Analyzing various components and functions of computers 1.5 Demonstrate understanding of community, global, and ethical impacts by analyzing appropriate uses of technology