TITLE 210. STATE DEPARTMENT OF EDUCATION
CHAPTER 20. STAFF
SUBCHAPTER 9. PROFESSIONAL STANDARDS: TEACHER EDUCATION AND CERTIFICATION
PART 17. FULL (SUBJECT MATTER) COMPETENCIES FOR LICENSURE AND CERTIFICATION

210:20-9-172. Full (subject matter) competencies for licensure and certification

Full (subject matter) competencies are listed in (1) through (42) by subject/content area.

(1) **Art education.** The candidate for licensure and certification:

(A) Has a sound philosophical understanding of visual art education and is able to support, justify, and implement the visual art curriculum.

(B) Has an understanding of past, current, and future trends and issues in art education as well as art education research.

(C) Has a knowledge of developmentally appropriate visual art content including aesthetics, art criticism, and art history, around a core of art production.

(D) Has a working knowledge of and has had experience in integration of the arts with other fine arts areas as well as other academic disciplines.

(E) Understands and has experience in the application of the elements and principles of art and design.

(F) Understands art history including various styles, periods, ethnic groups, and cultures from around the world.

(G) Has a knowledge of aesthetics (the field of study that relates to beauty in the arts) and art criticism (art review and commentary), along with teaching strategies appropriate for both areas that involve a variety of media and awareness of developmental levels.

(H) Understands and has experience in various methods of art production and creative development including drawing, figure drawing, color and design, painting, printmaking, sculpture, clay, applied design, and technology. Additional experience should involve metal, stone, fiber, papermaking, wood, and mixed media.

(I) Has proficiency in teaching strategies that are developmentally appropriate and inclusive of various student learning styles and is sensitive to the needs of diverse ethnic and cultural groups and those with disabilities.

(J) Develops a portfolio of his/her own artwork.

(K) Understands that contests and competitions have a valuable place in art education; however, they should not drive the development of the local curriculum.

(L) Has a knowledge of a wide variety of arts resources including community resources, materials, equipment, and information about exhibitions and/or major collections.

(M) Recognizes the important role of technology in education and that it may serve as a supportive tool in art education.

(N) Understands the art-related competencies in the Oklahoma core curriculum and knows how to incorporate them into various art classes.

(2) **Business education.** Competencies for business education are fulfilled by meeting competencies for vocational business.

(3) **Driver/safety education.** The candidate for licensure and certification:

(A) Applies, models, and teaches appropriate learning strategies for the safe operation of motor vehicles.

(B) Understands the social and emotional forces that influence the psychological makeup of young drivers and how these forces affect their driving behavior.

(C) Understands basic driving maneuvers including the universal concepts of defensive driving.

(D) Understands the physical laws of nature and the statutory laws that govern the safe operation of motor vehicles.

(E) Has an understanding of the basic mechanical systems that make up a motor vehicle and their influence on its operational limits.

(4) **Early childhood education (pre-kindergarten-third grade).** The competencies related to Early Childhood Education relate more specifically to the processes of learning and/or information processing than presentation of specific subject matter. The candidate for licensure and certification knows, understands, and uses:

(A) Factors that influence the development of young children, the sequence and interdependency of all areas, (i.e., physical, social, emotional, cognitive, and language) and uses that knowledge to meet the needs and characteristics of the group and individual children (birth to eight years of age) while respecting their unique rates of development.

(B) Positive child guidance strategies which help children learn to make responsible decisions regarding their own behavior and contributes to the development of self-control, self-motivation, and self-respect.

(C) The knowledge of how young children think, process information, and develop concepts in content areas including language, literacy, mathematics, science, health, safety, nutrition, social studies, art, music, drama, and movement.

(D) Integrative approaches (e.g., themes, topics, projects) to enable children to see and experience content areas and make meaningful connections to the child's life experience.

(E) Curriculum in regards to the children's needs and interests, as well as, developmentally appropriate skills and concepts.

(F) Developmentally appropriate strategies when planning, implementing, articulating, and evaluating (e.g., play, independent work, small group projects, group discussions, cooperative learning, open-ended questions, inquiry, and problem solving experiences.)

(G) A bias-free learning environment (indoors and outdoors) which is physically and psychologically safe for young children through the use of a balanced schedule, learning centers, and appropriate transitions and routine.

(H) Curriculum strategies, schedules, and the environment to meet the specific needs, interests, and experiences of all children with complex characteristics (i.e., adapting for those with disabilities, developmental delays, diverse cultures, or special abilities).

(I) Collaboration strategies regularly with families and other agencies in the community to enhance and support children's learning and development.

(J) Behaviors that recognize and respect diversity, how it influences learning, and builds connections among children's families, communities, and schools.

(K) Performance assessment (i.e., observation and documentation) and formal assessment to evaluate young children's development and learning for the purpose of planning appropriate and challenging programs, environments, and interactions and adapting for individual differences.

(L) Formative and summative evaluation measures to ensure comprehensive quality of the total program for children in reciprocal partnerships, with families, and the community.

(M) The historical, social, and ethical foundations of early childhood education which enables the teacher to articulate a philosophy and rationale for appropriate principles and practices.
(N) Self evaluation of teaching techniques and outcomes and modifies curriculum, strategies, schedules and environment to maximize the learning environment and enhance psychological safety for children.
(O) Knowledge to advocate for children by articulating to family, community and others the goals and methods used in the early childhood classroom.
(P) Instructional strategies/plans based on the Oklahoma core curriculum.
(Q) Understands and applies the following competencies in reading instruction as appropriate to the abilities of the student.

(i) Knows the stages of language development and the structure of the English language and alphabetic writing system including phonology, morphology, and orthography and their relationships to spelling and meaning.
(ii) Understands that primary language (oral) directly impacts the secondary languages (reading, writing, spelling). Knows and applies knowledge of implicit and explicit instruction in developing oral language. Knows the relationship of oral language to literacy.
(iii) Knows the developmental process of reading in order to assess, interpret, describe, develop appropriate instruction, monitor, reteach and reassess student's reading performance for concepts about print, phonological and phonemic awareness, phonics, spelling, word recognition, vocabulary, comprehension, fluency, and writing.
(iv) Identifies and applies all developmental levels of phonemic awareness to provide appropriate instruction in understanding words are made up of phonemes and that phonemes can be rearranged and manipulated to make different words that compose oral speech.
(v) Knows and provides appropriate systematic explicit and implicit phonological instruction for the application of spelling-sound correspondences for word analysis and for structural analysis for word recognition and word meaning development.
(vi) Knows and applies the relationships between spelling patterns and sounds of speech; knows how to support the student at each stage of spelling development; knows how to focus direct and indirect instruction to guide the student toward spelling proficiency.
(vii) Knows and applies knowledge of appropriate explicit and implicit instruction for vocabulary development (e.g., singular and plural).
(viii) Knows and applies strategies that promote comprehension and strategies to support children's understanding for the various elements of the different genres of text.
(ix) Knows and applies strategies and instructional approaches to support response to text and promote comprehension for literal, inferential, and critical/evaluative level (e.g., guided reading, literature and research circles).
(x) Knows and applies knowledge of instructional techniques to assist students with self-monitoring and self-corrections (i.e., semantics, syntax, and graphophonics).
(xi) Knows and applies the instructional strategies which contribute to the development of fluent reading.
(xii) Knows how to promote children's interest and engagement in reading and writing.

(R) Understands and applies the following competencies in mathematics instruction as appropriate to the abilities of the student.

(i) Builds on children's natural interest in mathematics and uses it to make sense of their physical and social worlds.

(ii) Establishes mathematics curriculum based on current knowledge of young children's cognitive, linguistic, physical and social-emotional development that builds on children's varying experiences.

(iii) Uses teaching practices that enhance children's problem-solving and reasoning processes which includes representing, communicating, and connecting mathematical ideas.

(iv) Understands that the curriculum should be coherent and compatible with known relationships and sequences of important mathematical ideas and that provides for children's deep and lasting interaction with key mathematical ideas.

(v) Introduces mathematical concepts, methods, and language through a variety of appropriate experiences and teaching strategies, including integrating mathematics with other activities and allowing ample time, materials and teacher support for children to explore and manipulate mathematical ideas.

(vi) Enhances children's mathematical knowledge, skills and strategies by providing an ongoing process of collecting information from multiple sources to determine a student's strengths and weaknesses in order to plan appropriate educational services.

(S) Understands and applies the following competencies in science instruction as appropriate to the abilities of the student.

(i) Plans an inquiry-based science program that develops a curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students in a framework of yearlong and short-term goals for students.

(ii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iii) Guides and facilities learning through focused interaction with students, recognizes and responds to student diversity, and encourages and models the skills of inquiry in order for all students to participate in science learning.

(iv) Uses ongoing multiple methods and systematically gathers data about students understanding and abilities.

(v) Designs and manages learning environments that provide students with the time, space and resources needed for developing science skills.

(vi) Uses a variety of instructional strategies to implement an integrated/interdisciplinary curriculum and understands the interaction between the sciences and the process skills.

(T) Understands and applies the following competencies in social studies instruction as appropriate to the abilities of the student.

(i) Designs and manages learning environments that provide opportunities for students to exhibit traits of good citizenship in a variety of settings and situations.

(ii) Selects teaching and assessment strategies that support the development of student understanding of their community and culture.

(U) Understands and applies the following competencies in the use of technology as appropriate to the abilities of the student.

(i) Bases the use of technology on the knowledge of how young children think, process information and develop concepts in content areas.

(ii) Enhances children's cognitive and social abilities through the appropriate use of technology.

(iii) Integrates technology into the learning environment and uses it as one of many options to support children's learning.

(iv) Promotes equitable access to technology for all children and their families.

(v) Advocates in collaboration with parents for more appropriate technology applications for all children.

(5) **Elementary education.** The competencies developed in specific subject areas such as mathematics, art, science, etc., have been developed on a prekindergarten through 12th grade continuum. Because of this, it is unnecessary for the elementary education competencies to address anything more than the processes through which the subject matter competencies will be presented in the classroom. The candidate for licensure and certification:

(A) Understands his/her role and the variety of approaches to the organization of elementary schools.

(B) Understands the essential nature and importance of interaction and communication with students, parents, community members and colleagues.

(C) Models the role of the lifelong learner.

(D) Understands the role of the teaching profession in curriculum change and school improvement.

(E) Understands the link between child development, curriculum, and instruction.

(F) Understands and uses a variety of strategies to:

(i) select methods of assessment appropriate to each of the subject matter areas and to the age, development, and characteristics of students,

(ii) interpret and communicate assessment results accurately and ethically, and

(iii) integrate information gained from assessments into instructional plans.

(G) Has a knowledge of current research findings about teaching and learning.

(H) Analyzes his/her teaching practices through a variety of techniques.

(I) Understands appropriate classroom management systems and discipline practices.

(J) Understands the selection and use of materials, resources, and technology appropriate to individual differences.

(K) Creates an environment that facilitates learning experiences which make subject matter meaningful to students.

(L) Understands the subject matter areas common to the elementary curriculum and the integration of those subject matter areas.

(M) Facilitates learning groups as appropriate to the needs and/or interests of students and the goals of the lesson.

(N) Understands and applies the following competencies in reading instruction.

(i) Knows the stages of language development and the structure of the English language and alphabetic writing system including phonology, morphology, and orthography and their relationships to spelling and meaning.

(ii) Understands that primary language (oral) directly impacts the secondary languages (reading, writing, spelling). Knows and applies knowledge of implicit and explicit instruction in developing oral language. Knows the relationship of oral language to literacy.

(iii) Knows the developmental process of reading in order to assess, interpret, describe, develop appropriate instruction, monitor, reteach and reassess student's reading performance for concepts about print, phonological and phonemic awareness, phonics, spelling, word recognition, vocabulary, comprehension, fluency, and writing.

(iv) Identifies and applies all developmental levels of phonemic awareness to provide appropriate instruction in understanding words are made up of phonemes and that phonemes can be rearranged and manipulated to make different words that compose oral speech.

(v) Knows and provides appropriate systematic explicit and implicit phonological instruction for the application of spelling-sound correspondences for word analysis and for structural analysis for word recognition and word meaning development.

(vi) Knows and applies the relationships between spelling patterns and sounds of speech; knows how to support the student at each stage of spelling development; knows how to focus direct and indirect instruction to guide the student toward spelling proficiency.

(vii) Knows and applies knowledge of appropriate explicit and implicit instruction for vocabulary development, e.g., prefixes, suffixes and roots.

(viii) Knows and applies strategies that promote comprehension and strategies to support children's understanding for the various elements of the different genres of text.

(ix) Knows and applies strategies and instructional approaches to support response to text and promote comprehension for literal, inferential, and critical/evaluative level, e.g., guided reading, literature and research circles.

(x) Knows and applies knowledge of instructional techniques to assist students with self-monitoring and self-corrections, i.e., semantics, syntax, and graphophonics.

(xi) Knows and applies the instructional strategies which contribute to the development of fluent reading.

(xii) Knows how to promote children's interest and engagement in reading and writing.

(O) Understands interdisciplinary teaching and collaboration.

(P) Understands that all students can develop proficiencies in the Oklahoma core curriculum.

(6) **English.** The candidate for licensure and certification:

(A) Maintains current knowledge of content-area concepts of written and oral communication, literature, and language systems (phonetic, semantic, syntactic, pragmatic). For purposes herein, language systems and what they mean or include are:

(i) "Phonetic" means the letter/sound system of a particular language.

(ii) "Pragmatic" means the use of particular language and its conventions that convey meaning in a cultural context.

(iii) "Semantic" means the meaning system of a given language.

(iv) "Syntactic" means the structure, order, and organization of a given language.

(B) Applies comprehension, analysis, interpretation, synthesis and evaluation of auditory, written, and visual messages. For purposes herein, these terms have the following meaning and include:

(i) "Auditory messages" means spoken language, intonation.

(ii) "Visual messages" means visual graphics such as illustrations, pictures, photographs, symbols, and signs, body language, facial expressions.

(iii) "Written messages" means connected discourse, text.

(C) Applies appropriate learning strategies for reading, writing, studying, and researching.
(D) Communicates effectively in speaking and writing, using appropriate language conventions. For purposes herein, "language conventions" means grammar, figurative language, mechanics, specialized vocabulary, technical terms.
(E) Understands the influences of social and historical contexts and culture on language and literature and adapts instruction accordingly.
(F) Uses the understanding of language acquisition and language learning processes to develop student proficiencies and to modify instruction for second-language learners.
(G) Establishes a reflective and creative learning environment.
(H) Uses a variety of assessment strategies to evaluate student proficiencies in the language arts and to modify instruction appropriately.
(I) Uses technology to accomplish professional goals and to develop student's literacy proficiencies.
(J) Understands and teaches strategies appropriate to a variety of forms (genres), text organizations, and structures, including functional print and informational print. For purposes herein:
(i) "Functional print" means environmental print messages (i.e., signs, logos, labels, directions);
(ii) "Genre" means a particular type of literature (i.e., short story, novel, poem, essay, drama)
(iii) "Informational print" includes reference materials, telephone books, almanacs, dictionaries.
(K) Understands the literacy process (i.e., reading process and writing process), and provides effective instruction in literacy skills and strategies.
(L) Understands, teaches, and implements Oklahoma's core curriculum.
(7) **Family and consumer sciences.** Competencies for family and consumer sciences are fulfilled by meeting competencies for vocational family and consumer sciences.
(8) **Foreign languages.** The candidate for licensure and certification will possess competencies as specified in (A) through (G).
(A) Listening (K-12). The candidate for licensure and certification:
(i) Understands main ideas and supporting details of oral presentations and conversations (e.g., prepared speeches, news broadcasts, interviews, short lectures).
(ii) Understands spontaneous speech on a variety of basic topics.
(iii) Comprehends sustained conversation or narrative of general topics (secondary only).
(B) Speaking (K-12). The candidate for licensure and certification:
(i) Narrates and describes events, objects, and activities with supporting details.
(ii) Participates in spontaneous, face-to-face conversation involving more complicated skills and social situations, such as elaborating, apologizing, debating.
(iii) Initiates, sustains, and closes a general conversation.
(iv) Displays some ability to support opinions, explain in detail, and make assumptions (secondary only).
(v) Uses varied strategies, such as paraphrasing or restating, to facilitate communication in the language being studied (secondary only).
(C) Reading (K-12). The candidate for licensure and certification:

(i) Reads authentic (from the culture of the language studied) materials, such as selected short stories, poetry, and other literary works, articles, personal correspondence, and simple technical material written for the general reader.

(ii) Comprehends facts in authentic (from the culture of the language studied) texts and materials and makes appropriate inferences.

(iii) Comprehends authentic (from the culture of the language studied) communications via various media and technology.

(D) Writing (K-12). The candidate for licensure and certification:

(i) Communicates by writing simple facts and ideas.

(ii) Expresses narratives and descriptions of a factual nature.

(iii) Writes professional and social correspondence (secondary only).

(E) Culture (K-12). The candidate for licensure and certification:

(i) Is knowledgeable about the products of the culture of the language being taught.

(ii) Is knowledgeable about practices of the culture of the language being taught.

(iii) Is able to compare and contrast local culture and cultures of the language being taught.

(F) Second language acquisition (K-12). The candidate for licensure and certification:

(i) Is knowledgeable about first language development and its relation to second language learning.

(ii) Is knowledgeable about varied teaching approaches, methods, and strategies.

(iii) Is knowledgeable about varied second language assessment strategies and techniques that are developmentally appropriate.

(G) The Oklahoma core curriculum (K-12). The candidate for licensure and certification:

(i) Understands Oklahoma's core curriculum for languages, and

(ii) Implements the skills and knowledge appropriate to the level(s) taught.

(9) **Journalism.** The candidate for licensure and certification:

(A) Maintains current knowledge of concepts, theories, and practical application of such in the field of journalism, including those associated with print media, news gathering, writing, research, graphic design, photography, technology, law, and ethics.

(B) Applies comprehension, analysis, interpretation, and evaluation of auditory, written, and visual communication. Projects can be created based on this knowledge, i.e., newspapers, yearbooks, magazines, or broadcasts.

(C) Applies appropriate learning strategies for research, writing, organization, editing, and presentation of written and visual messages to different audiences.

(D) Communicates effectively in oral presentation, written communication, and visual design.

(E) Understands the influence of social and historical context of culture on journalism and adapts instruction accordingly.

(F) Understands the impact and importance of cultural diversity on the communication process.

(G) Establishes a reflective and creative learning environment.

(H) Uses a variety of assessment strategies and teaching methods to encourage creativity, to inspire critical thinking to develop problem-solving techniques, and to establish and maintain excellence in all journalism pursuits.

(I) Uses technology to accomplish professional goals and to develop students' journalistic proficiencies in all aspects of the subject, including, but not limited to, desktop publishing, photojournalism, written communication, graphic design, and research.

(J) Understands and can teach strategies appropriate to a variety of journalistic areas, including print media, graphic arts, printing technology, broadcast media, electronic media, advertising, business management practices, public relations, and professional writing.

(K) Is prepared to teach students in the following areas:

(i) desktop publishing;

(ii) writing for print and electronic media;

(iii) editing;

(iv) photography and videography;

(v) graphic design and typography;

(vi) headline, preview, promotion, and caption writing.

(L) Is prepared to teach

(i) research skills;

(ii) interviewing;

(iii) ethics, law, and responsibilities of the press;

(iv) journalism history;

(v) television, video, radio and multimedia production;

(vi) staff management, organization and leadership techniques;

(vii) business management and accounting procedures.

(M) Is knowledgeable of professional resources, including state, regional, and national scholastic press associations, workshops, conferences, contests, and publications.

(N) Understands the importance of effective verbal and visual communication skills.

(O) Understands the role of co-curricular and extracurricular activities in the development of student interests as an extension of classroom instruction.

(P) Understands, teaches, and implements Oklahoma's core curriculum.

(10) **Library-media specialist.** The candidate for licensure and certification:

(A) Defines a program of information literacy and integrates it into the curriculum

(B) Defines a school library media program emphasizing information problem-solving skills and integrates it into the curriculum.

(C) Motivates and guides students and faculty in recognizing literature as an essential base of cultural and practical knowledge and in reading for pleasure as well as for information.

(D) Communicates effectively with students, faculty, staff, administrators, parents, other colleagues, and the general public by the ability to:

(i) exhibit communication skills necessary for collaborative planning with teachers.

(ii) develop and implement an effective public relations program to communicate library media program goals, needs, and accomplishments.

(E) Applies basic principles of evaluating and selecting resources and equipment to support the educational goals of the school by the ability to:

(i) develop selection policies which reflect curricular and instructional objectives, and informational and recreational needs of students and teachers.

(ii) develop criteria for evaluating and selecting specific print and non-print materials and equipment.

(iii) develop a collection of bibliographic aids, tools, and other sources to obtain current reviews and information about materials and equipment.

(iv) develop and implement procedures for preview, evaluation, selection, and acquisition of materials and equipment consistent with the district policy.

(v) reevaluate and maintain materials and equipment.

(F) Uses resources to support the personal, developmental, and curricular needs of students, and the instructional development needs of the faculty by the ability to:

(i) use a variety of ways to access information, including the use of new technologies.

(ii) provide specific information and resources in response to reference requests and recommend resources which support the curriculum.

(iii) conduct programs that include guidance in reading, listening, and viewing experiences.

(iv) assist students and staff in identifying, obtaining, using and/or producing media in appropriate formats for specific learning objectives.

(v) supervise students and staff in media production and equipment operation.

(vi) advocate resource-based learning through work with other faculty to identify appropriate instructional strategies and creative uses of resources.

(G) Recognizes the value of new technologies for information and instruction and assists faculty and students in their use by the ability to:

(i) recognize the importance of technological advancement to the education process.

(ii) demonstrate an understanding of the basic concepts, terminology, and applications of emerging technology.

(iii) recognize curricular implications that result from emerging technology and educational trends.

(iv) provide leadership in incorporating innovations into education.

(v) identify sources of information related to technological advancements.

(vi) provide technical advice and services for educational access to technology.

(H) Implements policies and procedures for effective and efficient acquisition, cataloging, processing, circulating, and maintaining equipment and resources to ensure access by the ability to:

(i) classify and catalog all print and nonprint media according to professionally accepted systems.

(ii) organize and maintain a current catalog and shelf list of all media.

(iii) implement procedures for initial processing, circulation, maintenance, service, and inventory of equipment and materials.

(I) Develops, implements, and evaluates school library media programs, including management of personnel, resources, and facilities by the ability to:

(i) assess the informational and instructional needs of students and faculty.

(ii) establish short- and long-range goals based on identified needs, the goals and objectives of the school district, state and national guidelines, and research findings.

(iii) prepare, justify, and administer a library media program budget.

(iv) prepare plans for new or renovated library media facilities.

(v) develop policies that assure optimum use of materials, equipment, facilities, and staff to support the curriculum.

(vi) train, supervise, and evaluate support staff, volunteers, and student helpers.

(vii) apply federal and state laws pertaining to media including those regarding copyright, privacy, and access to materials.

(viii) prepare statistical records and written reports.

(ix) assess and implement the use of new technologies for library media center management, educational applications, and information retrieval.

(x) evaluate the library media program based on established goals and standards.

(xi) apply effective management principles.

(xii) advocate, initiate, and implement agreements for resource sharing.

(J) Serves as a learning facilitator within schools and as a leader of faculty, administration, and students in the development of effective strategies for teaching and learning with the ability to:

(i) teach traditional and electronic skills in the retrieval, evaluation, and utilization of information to enable students to become independent learners.

(ii) plan and implement professional development programs.

(K) Demonstrates a commitment to professionalism by the ability to:

(i) exhibit comprehension of the roles, interrelationships, and interdependency of all types of libraries and information agencies.

(ii) exhibit an understanding of the role of the school library media program as a central element in the intellectual life of the school.

(iii) demonstrate a commitment to promoting intellectual freedom.

(iv) demonstrate professional integrity through ethical behavior.

(v) apply appropriate research findings and conduct action research to improve the library media program.

(vi) develop selection criteria that reflect relevant theories of learning and instruction.

(vii) apply basic principles of instructional design in producing resources for specified learning goals or objectives.

(11) **Elementary mathematics.**

(A) **Overview.** The goal of teacher preparation programs in mathematics, in partnership with common education, is to prepare future teachers for the twenty-first century. Teacher preparation programs must recognize the changes in society to prepare adaptive teachers who are capable of providing equitable schooling for all students of the twenty-first century. Teacher preparation programs must recognize that learning to teach effectively does not consist solely of acquiring content skills. Theory alone cannot create an effective teacher. Effective teaching also must include the processes or pedagogy of teaching that incorporate actual experiences with students and other teacher candidates within a body or bodies of knowledge. Teacher preparation programs are challenged with providing a rigorous body of content which is not isolated from the strategies of teaching and the application of that content.

(B) **Commitment.** The candidate for licensure and certification recognizes the individuality and worth of each student, believes that all students can learn and apply mathematics, and demonstrates these beliefs in practice.

(C) **Knowledge of students, mathematics and teaching.** The candidate for licensure and certification:

(i) Uses knowledge of child development and knowledge about the effects of this development on the learning of mathematics to guide curricular and instructional decisions. This will include primary, intermediate, and middle level philosophy, structure, organization, and child development.

(ii) Understands students' environment and cultural background, individual learning differences, student attitudes and aspirations, and community expectations and values on the learning of their students.

(iii) Has a broad and deep knowledge of the concepts, principles, techniques, and reasoning methods of mathematics that is used to set curricular goals and shape teaching.

(iv) Understands significant connections among mathematical ideas and the applications of these ideas to problem-solving in mathematics, in other disciplines, and in the world outside of school.

(v) Has experiences with practical applications of mathematical ideas and is able to incorporate these in their curricular and instructional decisions.

(vi) Is proficient in, at least, the mathematics content needed to teach the mathematics skills described in Oklahoma's core curriculum from multiple perspectives. This includes, but is not limited to, a concrete and abstract understanding of number systems and number sense, geometry, measurement, statistics and probability, functions, and algebra necessary to effectively teach the mathematics content skills addressed in the first through eighth grade as well as the mathematics process skills of problem-solving, reasoning, communication, and connections.

(vii) Is proficient in the use of a variety of instructional strategies to include, but not limited to, cooperative learning, use of concrete materials, use of technology (i.e., calculators and computers), and writing strategies to stimulate and facilitate student learning.

(viii) Is proficient in the design of instructional units which incorporate the mathematical processes of problem-solving, reasoning, communication, and connections into the instruction of content skills.

(ix) Has knowledge of how to teach and use this knowledge to make curriculum decisions, design instructional strategies and assessment plans, and choose materials and resources for mathematics instruction.

(x) Stimulates and facilitates student learning by using a wide range of formats, strategies, technologies, and procedures, and assuming a variety of roles to guide students' learning of mathematics.

(xi) Helps students learn mathematics by creating a safe and positive environment in which they take responsibility for learning.

(xii) Develops students' abilities to reason and think mathematically, to investigate and explore patterns, to discover structures and relationships, to formulate and solve problems, and to justify and communicate conclusions.

(xiii) Employs a range of formal and informal assessment methods to evaluate student learning in light of well-defined goals. Results should be used to guide the teaching process and provide opportunities for students to reflect on the strengths and weaknesses of individual performance.

(D) **Reflection and growth.** The candidate for licensure and certification:

(i) Regularly reflects on what one teaches and how one teaches.

(ii) Keeps informed of changes in mathematics and in the teaching of mathematics, continually seeking to improve his/her knowledge and practice.

(iii) Supports the involvement of families in their children's education, helps the community understand the role of mathematics and mathematics instruction in today's world, and, to the extent possible, involves the community in support of instruction.

(iv) Collaborates with peers and other education professionals to strengthen their school's programs, advance knowledge, and contribute to improving practice within the field.

(12) **Intermediate mathematics.**

(A) Overview. The goal of teacher preparation programs in mathematics, in partnership with common education, is to prepare future teachers for the twenty-first century. Teacher preparation programs must recognize the changes in society to prepare adaptive teachers who are capable of providing equitable schooling for all students of the twenty-first century. Teacher preparation programs must recognize that learning to teach effectively does not consist solely of acquiring content skills. Theory alone cannot create an effective teacher. Effective teaching also must include the processes or pedagogy of teaching that incorporate actual experiences with students and other teacher candidates within a body or bodies of knowledge. Teacher preparation programs are challenged with providing a rigorous body of content which is not isolated from the strategies of teaching and the application of that content.

(B) Commitment. The candidate for licensure and certification recognizes the individuality and worth of each student, believes that all students can learn and apply mathematics, and incorporates these beliefs into practice.

(C) Knowledge of students, mathematics and teaching. The candidate for licensure and certification:

(i) Has an understanding of middle level philosophy, structure, organization, and child development as well as an understanding of secondary level structure and child development.

(ii) Uses knowledge of child development and knowledge about the effects of this development on the learning of mathematics to guide curricular and instructional decisions.

(iii) Understands students' environment and cultural background, individual learning styles, student attitudes and aspirations, and community expectations and values on the learning of students.

(iv) Has a broad and deep knowledge of the concepts, principles, techniques, and reasoning methods of mathematics that is used to set curricular goals and shape teaching.

(v) Understands significant connections among mathematical ideas and the applications of these ideas to problem-solving in mathematics, in other disciplines, and in the world outside of school.

(vi) Has experiences with practical applications of mathematical ideas and is able to incorporate these in curricular and instructional decisions.

(vii) Is proficient in, at least, the mathematics content needed to teach the mathematics skills described in Oklahoma's core curriculum from multiple perspectives. This includes, but is not limited to, a concrete and abstract understanding of number systems and number theory, geometry and measurement, statistics and probability, functions, algebra, discrete mathematics, and calculus necessary to effectively teach the mathematics skills addressed in the sixth through eighth grade as well as the core and extended core skills in the algebra, geometry, functions, statistics, and probability sections of grades 9-12 in Oklahoma's core curriculum. This would also include the process skills and core skills addressed in the trigonometry and calculus sections of grades 9-12 in the Oklahoma core curriculum.

(viii) Is proficient in the use of a variety of instructional strategies to include, but is not limited to, cooperative learning, use of concrete materials, use of technology (i.e., calculators and computers), and writing strategies to stimulate and facilitate student learning.

(ix) Is proficient in the design of instructional units which incorporate the mathematical processes of problem-solving, reasoning, communication, and connections into the instruction of content skills.

(x) Has knowledge of how to teach and uses this knowledge in making curriculum decisions, designing instructional strategies and assessment plans, and choosing materials and resources for mathematics instruction.

(xi) Helps students learn mathematics by creating a safe and positive environment in which they take responsibility for learning.

(xii) Uses content knowledge and pedagogy to develop students' abilities to reason and think mathematically, to investigate and explore patterns, to discover structures and relationships, to formulate and solve problems, and to justify and communicate conclusions.

(xiii) Employs a range of formal and informal assessment methods to evaluate student learning in light of well-defined goals. Results should be used to guide the teaching process and provide opportunities for students to reflect on the strengths and weaknesses of individual performance.

(D) Reflection and growth. The candidate for licensure and certification:

(i) Keeps informed of changes in mathematics and in the teaching of mathematics, continually seeking to improve knowledge and practice. He/she regularly reflects on what is taught and how it is taught.

(ii) Supports the involvement of families in their children's education, helps the community understand the role of mathematics and mathematics instruction in today's world, and, to the extent possible, involves the community in support of instruction.

(iii) Collaborates with peers and other education professionals to advance knowledge and contribute to improving practice within the field.

(13) **Advanced/secondary mathematics.**

(A) Overview. The goal of teacher preparation programs in mathematics, in partnership with common education, is to prepare future teachers for the twenty-first century. Teacher preparation programs must recognize the changes in society to prepare adaptive teachers who are capable of providing equitable schooling for all students of the twenty-first century. Teacher preparation programs must recognize that learning to teach effectively does not consist solely of acquiring content skills. Theory alone cannot create an effective teacher. Effective teaching also must include the processes or pedagogy of teaching that incorporate actual experiences with students and other teacher candidates within a body or bodies of knowledge. Teacher preparation programs are challenged with providing a rigorous body of content which is not isolated from the strategies of teaching and the application of that content.

(B) Commitment. The candidate for licensure and certification recognizes the individuality and worth of each student, believes that all students can learn and apply mathematics, and incorporates these beliefs into practice.

(C) Knowledge of students, mathematics and teaching. The candidate for licensure and certification:

(i) Has an understanding of the middle level philosophy, structure, organization, and child development as well as an understanding of the secondary level structure and child development.
(ii) Uses knowledge of child development and knowledge about the effects of this development on the learning of mathematics to guide curricular and instructional decisions.
(iii) Understands students' environment and cultural background, individual learning styles, student attitudes and aspirations, and community expectations and values on the learning of students.
(iv) Has a broad and deep knowledge of the concepts, principles, techniques, and reasoning methods of mathematics that is used to set curricular goals and shape teaching.
(v) Understands significant connections among mathematical ideas and the applications of these ideas to problem solving in mathematics, in other disciplines, and in the world outside of school.
(vi) Has experiences with practical applications of mathematical ideas and is able to incorporate these in curricular and instructional decisions.
(vii) Is proficient in, at least, the mathematics content needed to teach the mathematics skills described in Oklahoma's core curriculum from multiple perspectives. This includes, but is not limited to, a concrete and abstract understanding of number systems and number theory, geometry and measurement, statistics and probability, functions, algebra, discrete mathematics, and calculus necessary to effectively teach the mathematics skills addressed in the sixth through twelfth grade in the Oklahoma core curriculum. (The depth and breadth of knowledge should be much greater than for the Intermediate Mathematics certification.)
(viii) Is proficient in the use of a variety of instructional strategies to include, but is not limited to, cooperative learning, use of concrete materials, use of technology (i.e., calculators and computers), and writing strategies to stimulate and facilitate student learning.
(ix) Is proficient in the design of instructional units which incorporate the mathematical processes of problem-solving, reasoning, communication, and connections into the instruction of content skills.
(x) Has knowledge of how to teach and uses this knowledge in making curriculum decisions, designing instructional strategies and assessment plans, and choosing materials and resources for mathematics instruction.
(xi) Helps students learn mathematics by creating a safe and positive environment in which they take responsibility for learning.
(xii) Uses content knowledge and pedagogy to develop students' abilities to reason and think mathematically, to investigate and explore patterns, to discover structures and relationships, to formulate and solve problems, and to justify and communicate conclusions.
(xiii) Employs a range of formal and informal assessment methods to evaluate student learning in light of well-defined goals. Results should be used to guide the teaching process and provide opportunities for students to reflect on the strengths and weaknesses of individual performance.

(D) Reflection and growth. The candidate for licensure and certification:

(i) Keeps informed of changes in mathematics and in the teaching of mathematics, continually seeking to improve knowledge and practice. He/she regularly reflects on what is taught and how it is taught.

(ii) Supports the involvement of families in their children's education, helps the community understand the role of mathematics and mathematics instruction in today's world, and, to the extent possible, involves the community in support of instruction.

(iii) Collaborates with peers and other education professionals to advance knowledge and contribute to improving practice within the field.

(14) **Middle level personnel.** The competencies developed here focus on middle level philosophy, structure, organization, and student development. Subject matter competencies can be pulled from the K-12 competencies developed by the subject matter committees. The candidate for licensure and certification:

(A) Understands the history, philosophy, principles, structure, and organization of middle level education as it relates to early adolescence.

(B) Uses methods and materials for interdisciplinary instruction at the middle school level.

(C) Demonstrates an understanding of child-centered versus content-centered methodologies to meet the individual needs of middle level students.

(D) Has knowledge and skills pertaining to classroom management, organization, and student discipline at the middle school level.

(E) Understands the unique developmental characteristics and needs of the early adolescent, focusing on cognitive, physical, and social development.

(F) Establishes an environment using active participation to teach problem-solving and communication skills (reading, listening, writing, and speaking) as an integral part of all instruction.

(G) Understands curriculum-based teacher advisory programs, which foster character, responsibility, respect for others, and active community involvement.

(H) Understands the need to work collaboratively with other teachers, staff members, parents, resource persons, and community groups to enhance and support the education of young adolescents.

(I) Uses a variety of instructional strategies that address different learning styles to meet the needs of early adolescents.

(J) Models the role of the lifelong learner.

(K) Insures that all students develop proficiencies in the Oklahoma core curriculum.

(15) **Instrumental/general music.** The candidate for licensure and certification:

(A) Understands the basic philosophy of music education and is able to justify music within the school curriculum.

(B) Understands how music and fine arts experiences enhance student life experience and can promote music and the other arts in the community as well as within the school (including group motivational strategies and group management methods).

(C) Participates in ongoing professional development which includes involvement with professional associations and current experiences in performing endeavors.

(D) Has knowledge of effective methodologies and practices for encouraging self-analysis and musical independence.

(E) Has mastery of a major instrument, including appropriate techniques of breathing, embouchure (mouth position), posture, and hand position.

(F) Has a broad understanding of music history, including various styles and musical contributions of different cultural and ethnic groups.
(G) Has the ability to play an instrument(s) and teach a beginning instrumental music class, using current methods and quality music literature (collection of written music) for band, small ensemble, and solo.
(H) Is able to recognize and evaluate the sequential development of students, including those with disabilities.
(I) Has knowledge of where to locate printed musical resources and professional consultants.
(J) Has a working knowledge of how music integrates with all other academic disciplines, including other fine arts areas.
(K) Has the skill to collaborate and coordinate experiences with teachers of other academic disciplines, including other fine arts areas.
(L) Has competency in conducting techniques.
(M) Is able to teach basic fundamentals of embouchure (mouth position), hand position, technique and other related skills, of all the standard band and orchestra instruments at a basic Grade 6-8 level, including making a characteristic sound.
(N) Is able to sing a diatonic melody at sight, using a consistent sight-singing method, and the skill to teach that method appropriately at each grade level. "Diatonic" means relating to a musical scale having eight tones to the octave and using a fixed pattern of intervals without chromatic deviation.
(O) Is able to count rhythms using a consistent rhythm reading system and demonstrates the skill to teach that method appropriately at each grade level.
(P) Has knowledge of music education approaches such as Carl Orff, Zoltar Kodaly and Jaques-Dalcroze and is able to prepare and teach a lesson according to each of these approaches.
(Q) Has basic proficiency in piano, including a knowledge of keyboard harmony and is able to play functional progressions and simple accompaniments.
(R) Has the ability to use technology in the music classroom, such as basic knowledge of MIDI (musical instrument digital interface), sequencing and notational software programs, sound system set-up, and to make successful recordings of music ensembles.
(S) Understands basic laws of copyright pertaining to the correct use of copyrighted printed music and related responsibilities.
(T) Understands the competencies in General Music in Oklahoma's core curriculum and exhibits the skill to incorporate them into various instrumental music classes.

(16) **Vocal/general music.** The candidate for licensure and certification:
(A) Understands the basic philosophy of music education and is able to justify music within the school curriculum.
(B) Understands how music and fine arts experiences enhance student life experience and can promote music and the other arts in the community as well as within the school (including group motivational strategies and group management methods).
(C) Has knowledge of effective methodologies and practices for encouraging self-analysis and musical independence.
(D) Understands proper breathing techniques and tone production techniques.
(E) Has a knowledge of quality literature (collection of written music), both choral and solo, as well as folk songs appropriate for children.

(F) Understands the changing voice, both male and female.

(G) Has knowledge of where to locate professional consultants and printed music resources, such as music stores, music publisher catalogues,and textbook companies.

(H) Has a working knowledge of how to coordinate vocal music with all academic disciplines including other fine arts areas.

(I) Has proficiency in piano, including knowledge of scales, chords and the ability to warm up a choir and play simple accompaniments.

(J) Participates in ongoing professional development which includes involvement with professional associations.

(K) Has the ability to recognize and evaluate sequential musical development for all students, including those with disabilities.

(L) Has competency in conducting, including the ability to show musical nuance (subtle distinction or variation).

(M) Is able to prepare a series of lesson plans appropriate to each teaching level K-12.

(N) Has the ability to sing a diatonic melody at sight, using a consistent sight singing method and the skill to teach that method appropriately at each grade level. "Diatonic" means relating to a musical scale having eight tones to the octave and using a fixed pattern of intervals without chromatic deviation.

(O) Has the ability to count rhythms using a consistent rhythmic reading system and the skills to teach that method appropriately at each grade level.

(P) Has knowledge of the music education approaches such as Carl Orff, Zoltar Kodaly and Jaques-Dalcroze and is able to prepare and teach a lesson according to each of these approaches.

(Q) Has broad knowledge and understanding of music history including various styles, periods and cultures.

(R) Has broad knowledge and understanding of a variety of music and musical practices representative of different cultural and ethnic groups.

(S) Has the ability to use technology in the music classroom, such as basic knowledge of MIDI (musical instrument digital interface), sequencing and notational software programs, sound system set-up, and to make successful recordings of music ensembles.

(T) Understands basic laws of copyright pertaining to the correct use of copyrighted printed music and related responsibilities.

(U) Understands the competencies in General Music in Oklahoma's core curriculum and exhibits the skill to incorporate them into various vocal music classes.

(17) **Physical education/health/safety.** Competencies specified in both (A) Physical Education/Safety and (B) Health/Safety are required for licensure and certification:

(A) Physical education/safety. The candidate for licensure and certification:

(i) Understands the Oklahoma core curriculum and is able to develop instructional strategies/plans based on the Physical Education Section of the Oklahoma core curriculum.

(ii) Knows the developmental levels of growth and coordination of children (Grades K-12) and provides appropriate learning opportunities that support the physical and intellectual development of all students.

(iii) Understands and uses a variety of both psychomotor and cognitive assessment strategies to evaluate and modify the teaching/learning process.

(iv) Understands and utilizes physical education activities for curriculum integration.

(v) Applies movement concepts and principles to the learning and development of rhythm and motor skills for the following:

(I) locomotor movement

(II) nonlocomotor movement

(III) manipulative skills

(vi) Promotes participation and involvement in age-appropriate physical activities/sports suitable for lifelong participation in the following areas:

(I) lifetime activities/sports (i.e., skiing, camping, hiking, clogging)

(II) individual activities/sports (i.e., golf, tennis, self-defense, spelunking)

(III) nontraditional team activities/sports (i.e., korfball, lacrosse, square dancing)

(IV) traditional team activities/sports (i.e., basketball, volleyball, softball)

(vii) Understands adaptive learning activities for students with special needs.

(viii) Knows and can demonstrate appropriate fitness, wellness, and personal management components including:

(I) Fitness. Fitness includes: flexibility; muscular strength; cardiovascular fitness endurance; contraindicated exercises (traditional exercises which have been proven, through research, to be damaging to the body); nutrition.

(II) Wellness. Wellness encompasses: body composition; stress management; safety and accident prevention; designing and assessing personal fitness program; weight control; consumer education.

(III) Personal management skills: cooperation; sportsmanship; self-discipline; goal setting; following rules.

(ix) Uses information technology to enhance learning and to enhance personal productivity:

(I) Demonstrates knowledge of current technologies and their application in Physical Education.

(II) Designs, develops, and implements student learning activities that integrate information technology.

(III) Uses technologies to communicate, network, locate resources, and enhance continuing professional development.

(B) Health/safety. The candidate for licensure and certification:

(i) Communicates the concepts, purposes, and importance of health education; as evidenced by the following indicators:

(I) Describes the discipline of health education within the school setting.

(II) Describes the interdependence of health education and the other components of a coordinated school health program.

(III) Delivers accurate and up-to-date information about the most common comprehensive school health education components; including but not limited to: community and environmental health; consumer health; disease prevention and control; healthy communication; human growth and development; mental and emotional health; nutrition; personal health; safety and injury prevention; substance abuse.

(IV) Provides a rationale for health education, grades 1-12.

(V) Understands the variables that shape decisions about health behaviors.

(VI) Defines the role of the health education teacher within a coordinated school health program.

(VII) Explains the importance of health education.

(VIII) Identifies the kinds of school and community support necessary to implement a coordinated school health education program.

(IX) Understands the importance of ongoing professional development for health education teachers.

(X) Describes the importance of modeling positive, healthful behaviors.

(ii) Assesses the health education needs and interests of students.

(I) Uses information about health needs and interests of students.

(II) Recognizes behaviors that promote or compromise health.

(iii) Plans school health instruction.

(I) Selects realistic program goals and objectives.

(II) Identifies a scope and sequence plan for school health instruction.

(III) Plans health education lessons which reflect the abilities, needs, interests, developmental levels, and cultural backgrounds of students.

(IV) Describes effective ways to promote cooperation with and feedback from administrators, parents, and other community members.

(V) Determines procedures which are compatible with school policy for implementing curricula.

(VI) Develops activities to meet program goals and objectives based on the Health/Safety, and for grades 7-12, HIV/AIDS Prevention Education Sections of Oklahoma's core curriculum and on the National Health Education Standards.

(iv) Implements school health instruction.

(I) Employs a variety of strategies to facilitate implementation of a school health education curriculum; strategies include: provides a core health education curriculum; integrates health and other content areas; uses technology as a strategy to deliver health education; involves parents, guardians, or custodians of students in the teaching/learning process.

(II) Incorporates appropriate resources and materials including: selects valid and appropriate sources of information about health; uses school and community resources within a comprehensive program; refers students to valid and appropriate sources of health information.

(III) Employs appropriate strategies for dealing with health issues.

(IV) Adapts existing health education curricular models to community and student needs and interests.

(v) Evaluates the effectiveness of school health instruction.

(I) Uses appropriate criteria and methods unique to health education for evaluating student achievement.

(II) Interprets and applies student evaluation results to improve health instruction.

(18) **Psychometrist.** The candidate for licensure and certification:

(A) Understands and integrates into practice the philosophical, historical, and legal foundations of special education as applicable to the role of the psychometrist/educational diagnostician, in the following areas, including laws, regulations, and policies/procedures related to special education assessment, placement, and due process.

(B) Demonstrates knowledge, understanding, and application of ethical issues and standards of professional practice within the educational setting, in the following areas:

(i) ethical conduct and legal issues of the profession

(ii) role and function of the psychometrist/educational diagnostician
(iii) confidentiality
(iv) professional issues/standards
(v) training standards for particular instruments and procedures
(vi) continuing professional growth/development

(C) Demonstrates knowledge and skills in assessment, diagnosis, evaluation, and eligibility determination within the multidisciplinary team process for children with disabilities who may require special education services or early childhood intervention services, as follows:

(i) collection of assessment data for infants through school-age children, including the selection, administration, accurate scoring, and reporting of instruments and procedures appropriate to the areas of concern such as basic academic skills, cognitive/intellectual, developmental, perception, language, adaptive behavior, and classroom behavior

(ii) the adequacy, appropriate use, and limitations of assessment and evaluation instruments and procedures to be used by the psychometrist/educational diagnostician for educational purposes and recommendations

(iii) nondiscriminatory assessment strategies for culturally and linguistically diverse children

(D) Has knowledge and skills in effective communication and collaboration within the multidisciplinary team process, in the following areas:

(i) consultation for instructional interventions and problem-solving
(ii) educational recommendations and decision-making

(E) Understands and integrates into practice basic psychological foundations, including:

(i) cultural diversity
(ii) child and adolescent development
(iii) human exceptionalities
(iv) learning/educational psychology

(F) Understands and integrates into practice educational foundations, including:

(i) education of the exceptional learner
(ii) instructional and remedial techniques
(iii) the educational service delivery system

(19) **Reading specialist.** The candidate for licensure and certification shall possess the competencies specified in (A) through (D) of this paragraph:

(A) Reading philosophy and professional roles. Competencies are:

(i) Provides reading instructions so as to facilitate the process of reading development in which teacher and learner work together as members of a community of readers.

(ii) Has knowledge of the linguistic, dialectal, and developmental differences in readers that may affect instructional strategies.

(iii) Knows the principles and issues of major theories of language development as they relate to reading instruction.

(iv) Applies flexible approaches to reading instruction that recognize the uniqueness of individual students.

(v) Develops strategies for working with school staff, other reading specialists, and professionals within and beyond the school to foster reading development for individuals and groups.

(vi) Understands reading as a constructive process in which the experience of the reader, the text, and the requirements of the reading event interact in the creation of meaning.

(vii) Identifies appropriate interaction with staff members (e.g., content, special, classroom teachers) to facilitate reading development for all students.

(viii) Recognizes factors and procedures related to the involvement of parents and/or school and community groups at all stages of reader development.

(ix) Identifies and understands procedures involved in determining curriculum needs for reading programs.

(x) Identifies criteria and/or procedures involved in planning reading curriculum.

(xi) Identifies appropriate methods and resources related to the reading process for promoting professional growth for self and school staff.

(B) Instructional practices. Competencies are:

(i) Understands emergent literacy development and the types of experiences and concepts that support learning to read.

(ii) Applies knowledge of and provides appropriate instruction of graphophonemic relationships.

(iii) Understands the relationship among word knowledge (i.e., word attack and word recognition), reading fluency, and comprehension.

(iv) Identifies various word attack strategies (i.e., semantic clues, syntactic clues, graphophonemic clues), and various word recognition strategies (i.e., those that promote meaningful vocabulary growth).

(v) Provides appropriate instruction of strategies that promote comprehension at the literal, inferential, and critical/evaluative levels for both narrative and expository texts.

(vi) Understands the importance of adjusting reading strategies for different reading purposes.

(vii) Provides appropriate instruction of various techniques and study strategies (i.e., locating, organizing, and interpreting information).

(viii) Identifies content area reading strategies that activate and/or develop background knowledge.

(ix) Assists students in applying reading-related strategies to new learning situations.

(x) Understands the issues and procedures involved in teacher modeling, teacher-guided application, and independent practice.

(xi) Develops proficiencies in providing instruction associated with a variety of reading instructional approaches, including phonics, language experience, basal (basic) readers, and literature-based.

(xii) Implements cooperative learning strategies during reading instruction.

(xiii) Analyzes the strengths and weaknesses of the use of readability formulas in assessing instructional materials.

(xiv) Identifies appropriate criteria for selecting instructional materials (e.g., textbooks, reference books, computer software).

(xv) Analyzes issues and procedures involved in modifying curriculum to meet the needs of individual students.

(xvi) Recognizes the factors involved in organizing reading instruction to encourage individual student success.

(xvii) Promotes meaningful parent/guardian-child interaction related to reading.

(xviii) Creates a reading environment to increase student's motivation to read widely and independently and to promote reading as a lifelong habit.

(C) Reading diagnosis. Competencies are:

(i) Identifies factors that contribute to reading difficulties.

(ii) Understands the nature of reading difficulties (e.g., students' knowledge and strategies, factors embedded in the reading materials, instructional factors).

(iii) Implements, interprets, and uses informal and formal assessment and evaluation procedures for identifying and diagnosing reading difficulties (e.g., observation, criterion-referenced tests, norm-referenced tests, miscue analysis, informal reading inventories, anecdotal records).

(iv) Understands, analyzes, and creates case studies for diagnostic purposes.

(v) Identifies issues, procedures, and limitations involved in using oral diagnostic tests, silent diagnostic tests, visual and auditory screening, and observational diagnostic techniques.

(vi) Identifies activities and/or strategies appropriate for individual or group instruction for students with reading difficulty.

(D) Evaluation and assessment. Competencies are:

(i) Identifies characteristics, strengths, and weaknesses of formal and informal tests and instruments (i.e., criterion-referenced, norm-referenced, achievement tests, diagnostic tests, checklists, observations, and anecdotal records.)

(ii) Analyzes issues involved in the use of tests and other evaluation instruments for classification or placement, diagnosis, or other evaluative purposes.

(iii) Selects tests or other instruments appropriate for a given evaluation purpose.

(iv) Understands the principles and/or procedures involved in the interpretation of test results.

(v) Identifies procedures for cooperating with various professionals in assessment, evaluation, and instructional planning for students with special needs.

(vi) Identifies criteria for evaluating reading programs.

(20) **Reserve Officers' Training Corps (ROTC).** Competency for ROTC certification will be verified by a recommendation from the appropriate ROTC Regional Headquarters.

(21) **School counselor.**

(A) The candidate for licensure and certification:

(i) Uses an understanding of human development to provide a comprehensive, developmental guidance and counseling program.

(ii) Understands the impact of environmental influences on students' development and achievement, and helps students develop strategies to resolve or cope with situations that may hinder learning.

(iii) Demonstrates an appreciation of human diversity by providing equitable guidance and counseling services for all students and by promoting a climate of mutual respect that helps students value themselves and others.

(iv) Uses effective leadership skills to plan, implement, and evaluate a comprehensive, developmental guidance and counseling program to address the needs of all students.

(v) Provides guidance and counseling services to address the needs and concerns of students and to help students develop skills to use in future situations.

(vi) Facilitates the educational and career development of individual students to help all students achieve success.

(vii) Uses formal and informal assessment to provide information about and to students, to monitor student progress, and to recommend changes to the student's educational environment.

(viii) Consults with parents and school personnel, provides professional expertise, and establishes collaborative relationships that foster a support system for students, parents, and the school community.

(ix) Establishes strong and positive ties with the home and the community to promote and support students' growth in school and beyond the school setting.

(x) Has knowledge of professional ethical codes, the importance of professional development, and the need to work with colleagues to advance the profession.

(B) Competency for School Counselor certification may also be verified by the Nationally Certified School Counselor (NCSC) credential.

(22) **School nurse.** Competency for School Nurse certification will be verified by a current registered nurse's license issued by the Oklahoma State Board of Nurse Registration and Nursing Education.

(23) **School psychologist.**

(A) The candidate for licensure and certification:

(i) Understands and integrates into practice the principles of professional school psychology, including:

(I) ethical conduct and legal issues

(II) confidentiality

(III) role and function of the school psychologist

(IV) service delivery models

(V) professional issues/standards

(VI) history and foundations

(VII) continuing professional growth/development

(ii) Demonstrates knowledge and skills in a comprehensive range of assessment, diagnosis, evaluation, and eligibility or intervention determination within the multidisciplinary team process, including:

(I) for children with disabilities who may require special education, early childhood intervention services, or other exceptional needs

(II) assessment for interventions

(III) collection of assessment data for infants through school-age children, including the selection, administration, accurate scoring, reporting, and interpretation of instruments and procedures appropriate to the areas of concern

(IV) the adequacy, appropriate uses, and limitations of assessment and evaluation instruments and procedures to be used by the school psychologist

(V) nondiscriminatory assessment strategies for culturally and linguistically diverse children

(iii) Demonstrates knowledge and skills in prevention, intervention, consultation, and counseling, including:

(I) behavioral and social skills

(II) cognitive/intellectual

(III) child developmental

(IV) academic learning/instructional

(V) mental health needs

(VI) crisis prevention/intervention

(iv) Demonstrates knowledge and skills in effective communication and collaboration, including:

(I) consultation for interventions and problem-solving

(II) recommendations and decision-making concerning educational and mental health needs of children

(III) working with families, children, professionals, and other service systems

(v) Demonstrates knowledge and application of statistics, research methodologies/designs, measurement, and program evaluation.

(vi) Understands and integrates into practice psychological foundations including:

(I) biological bases of behavior (developmental, neuropsychological, physiological, and other biological influences on behavior)

(II) social bases of behavior (social psychology and development)

(III) cultural diversity and cultural bases of behavior

(IV) child and adolescent development

(V) human exceptionalities and individual differences

(VI) human learning

(vii) Understands and integrates into practice educational foundations, including:

(I) education of the exceptional learner

(II) instructional and remediation techniques/intervention methods

(III) organization and operation of the schools

(IV) the educational and alternative service delivery systems

(B) Competency for School Psychologist certification may also be verified by the Nationally Certified School Psychologist (NCSP) credential.

(24) **Elementary science.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one

(i) Develops a framework of yearlong and short-term goals for students.

(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students.

(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one

(i) Focuses and supports inquiries while interacting with students.

(ii) Facilitates discussion among students about scientific ideas.

(iii) Challenges students to accept and share responsibility for their own learning.

(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.

(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of one's own teaching and of student learning. In doing this, one

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space, and resources needed for developing science skills. In doing this, one

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Ensures a safe working environment.

(iv) Makes the available science tools, materials, media, and technological resources accessible to students.

(v) Identifies and uses resources outside the school.

(vi) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one

(i) Respects the diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies to implement an integrated/ interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and to understand the interaction between the sciences and the process skills. Content areas and concepts within each are listed in subparagraphs (A) through (C) herein:

(i) Physical science content

(I) Properties of objects and materials

(II) Properties and changes of properties in matter

(III) Position and motion of objects

(IV) Motion and force

(V) Light, heat, electricity, and magnetism

(VI) Transfer of energy

(ii) Earth/space content

(I) Properties of earth materials

(II) Objects in the sky

(III) Changes in earth and sky

(IV) Structure of the earth system

(V) Earth's history

(VI) Earth in the solar system

(iii) Life science content

(I) The characteristics of organisms

(II) The life cycle of organisms

(III) Organisms and environment

(IV) Structure and function in living systems
(V) Reproduction and heredity
(VI) Regulation and behavior
(VII) Population and ecosystem
(VIII) Diversity and adaption of organisms

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades K through 8. Identified science concepts and/or science content areas are:

(i) System, order and organization
(ii) Constancy, change, equilibrium and measurement
(iii) Form and function
(iv) Abilities of technological design
(v) Abilities to distinguish between natural objects and objects made by humans
(vi) Understanding about science and technology
(vii) Science as a human endeavor
(viii) Nature of science
(ix) History of science
(x) Personal health
(xi) Characteristics and changes in populations
(xii) Population, resources, and environment
(xiii) Types of resources
(xiv) Natural hazards
(xv) Changes in environments
(xvi) Science and technology in local challenges
(xvii) Risk and benefits
(xviii) Science and technology in society

(25) **Earth science 6-12.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one

(i) Develops a framework of yearlong and short-term goals for students.
(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities and experiences of students.
(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.
(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one:

(i) Focuses and supports inquiries while interacting with students.
(ii) Facilitates discussion among students about scientific ideas.
(iii) Challenges students to accept and share responsibility for their own learning.
(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.
(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of own teaching and of student learning. In doing this, one

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space, and resources needed for developing science skills. In doing this, one

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Ensures a safe working environment.

(iv) Makes the available science tools, materials, media, and technological resources accessible to students.

(v) Identifies and uses resources outside the school.

(vi) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one

(i) Respects the diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills, attitudes, and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies to implement an integrated interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and understand the interaction between the sciences and the process skills. Identified Earth/Space Science content areas are:

(i) Structure of the earth system

(ii) Earth's history

(iii) Earth in the solar system

(iv) Energy in the Earth system

(v) Geochemical cycles

(vi) The universe and Earth's system

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades 6 through 12. Identified science concepts and/or science content areas are:

(i) System, order and organization

(ii) Evidence, models and explanation

(iii) Constancy, change, equilibrium and measurement

(iv) Form and function

(v) Abilities of technological design

(vi) Understanding about science and technology

(vii) Science as a human endeavor
(viii) Nature of science
(ix) Nature of scientific knowledge
(x) History of science
(xi) Historical perspectives
(xii) Personal health
(xiii) Personal and community health
(xiv) Population, resources, and environments
(xv) Population growth
(xvi) Natural hazards
(xvii) Natural resources
(xviii) Risks and benefits
(xix) Environmental quality
(xx) Natural and human induced hazards
(xxi) Science and technology in society
(xxii) Science and technology in local, national, and global challenges

(26) **Biological sciences 6-12.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one:

(i) Develops a framework of yearlong and short-term goals for students.

(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students.

(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one:

(i) Focuses and supports inquiries while interacting with students.

(ii) Facilitates discussion among students about scientific ideas.

(iii) Challenges students to accept and share responsibility for their own learning.

(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.

(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of own teaching and of student learning. In doing this, one:

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space and resources needed for developing science skills. In doing this, one:

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Makes the available science tools, materials, media, and technological resources accessible to students.

(iv) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one:

(i) Respects diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies to implement an integrated interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and understands the interaction between the sciences and the process skills. Identified Biological Sciences content areas are:

(i) Structure and function in living systems

(ii) Reproduction and heredity

(iii) Regulation and behavior

(iv) Population and ecosystem

(v) Diversity and adaption of organisms

(vi) The cell

(vii) The molecular basis of heredity

(viii) Biological adaptation

(ix) The interdependence of organisms

(x) Matter, energy, organization in living systems

(xi) Behavior of organisms

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades 6 through 12. Identified Science concepts and content areas are:

(i) System, order, and organization

(ii) Evidence, models, and explanation

(iii) Constancy, change, equilibrium, and measurement

(iv) Form and function

(v) Abilities of technological design

(vi) Understanding about science and technology

(vii) Science as a human endeavor

(viii) Nature of science

(ix) Nature of scientific knowledge

(x) History of science

(xi) Historical perspectives

(xii) Personal health

(xiii) Personal and community health

(xiv) Population, resources, and environments

(xv) Population growth
(xvi) Natural hazards
(xvii) Natural resources
(xviii) Risks and benefits
(xix) Environmental quality
(xx) Natural and human induced hazards
(xxi) Science and technology in society
(xxii) Science and technology in local, national, and global challenges

(27) **Physical sciences 6-12.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one:

(i) Develops a framework of yearlong and short-term goals for students.

(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students.

(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one:

(i) Focuses and supports inquiries while interacting with students.

(ii) Facilitates discussion among students about scientific ideas.

(iii) Challenges students to accept and share responsibility for their own learning.

(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.

(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of own teaching and of student learning. In doing this, one:

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space, and resources needed for developing science skills. In doing this, one:

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Ensures a safe working environment.

(iv) Makes the available science tools, materials, media, and technological resources accessible to students.

(v) Identifies and uses resources outside the school.

(vi) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one:

(i) Respects the diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies and use integrated and interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and understands the interaction between the sciences and the process skills. Identified Physical Science concepts and content areas are:

(i) Properties and changes of properties in matter

(ii) Motions and force

(iii) The structure of atoms

(iv) Structure and properties of matter

(v) Chemical reactions

(vi) Conservation of energy

(vii) Interactions of energy and matter

(viii) The earth system

(ix) The Universe

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades 6 through 12. Identified Science concepts and content areas are:

(i) System, order, and organization

(ii) Evidence, models, and explanation

(iii) Constancy, change, equilibrium, and measurement

(iv) Form and function

(v) Abilities of technological design

(vi) Understanding about science and technology

(vii) Science as a human endeavor

(viii) Nature of science

(ix) Nature of scientific knowledge

(x) History of science

(xi) Historical perspectives

(xii) Personal health

(xiii) Personal and community health

(xiv) Population, resources, and environments

(xv) Population growth

(xvi) Natural hazards

(xvii) Natural resources

(xviii) Risks and benefits

(xix) Environmental quality

(xx) Natural and human induced hazards

(xxi) Science and technology in society

(xxii) Science and technology in local, national, and global challenges

(28) **Chemistry 6-12.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one:

(i) Develops a framework of yearlong and short-term goals for students.

(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students.

(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one:

(i) Focuses and supports inquiries while interacting with students.

(ii) Facilitates discussion among students about scientific ideas.

(iii) Challenges students to accept and share responsibility for their own learning.

(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.

(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of own teaching and of student learning. In doing this, one:

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space, and resources needed for developing science skills. In doing this, one:

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Ensures a safe working environment.

(iv) Makes the available science tools, materials, media, and technological resources accessible to students.

(v) Identifies and uses resources outside the school.

(vi) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one:

(i) Respects the diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies and use integrated and interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and understands the interaction between the sciences and the process skills. Identified Chemistry concepts and content areas are:

(i) Structures and properties of matter
(ii) Chemical reactions
(iii) Transfer of energy
(iv) The structure of atoms
(v) Properties and changes of properties in matter

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades 6 through 12. Identified Science concepts and content areas are:

(i) System, order, and organization
(ii) Evidence, models, and explanation
(iii) Constancy, change, equilibrium, and measurement
(iv) Form and function
(v) Abilities of technological design
(vi) Understanding about science and technology
(vii) Science as a human endeavor
(viii) Nature of science
(ix) Nature of scientific knowledge
(x) History of science
(xi) Historical perspectives
(xii) Personal health
(xiii) Personal and community health
(xiv) Population, resources, and environments
(xv) Population growth
(xvi) Natural hazards
(xvii) Natural resources
(xviii) Risks and benefits
(xix) Environmental quality
(xx) Natural and human induced hazards
(xxi) Science and technology in society
(xxii) Science and technology in local, national, and global challenges

(29) **Physics 6-12.** The candidate for licensure and certification:

(A) Is able to plan an inquiry-based science program for students using as a framework, Oklahoma's core curriculum. In doing this, one:

(i) Develops a framework of yearlong and short-term goals for students.

(ii) Understands curriculum design to meet the interests, knowledge, understanding, abilities, and experiences of students.

(iii) Selects teaching and assessment strategies that support the development of student understanding and encourage a community of science learners.

(iv) Works with colleagues within and across disciplines and grade levels.

(B) Is able to guide and facilitate learning. In doing this, one:

(i) Focuses and supports inquiries while interacting with students.

(ii) Facilitates discussion among students about scientific ideas.

(iii) Challenges students to accept and share responsibility for their own learning.

(iv) Recognizes and responds to student diversity and encourages all students to participate fully in science learning.

(v) Encourages and models the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and questioning that characterizes science.

(C) Is able to engage in ongoing assessment of own teaching and of student learning. In doing this, one:

(i) Uses multiple methods and systematically gathers data about student understanding and ability.

(ii) Analyzes assessment data to guide teaching.

(iii) Guides students in the evaluation of their work.

(iv) Uses student data, observations of teaching, and interaction with colleagues to reflect on and improve teaching practice.

(v) Uses student assessment information and classroom observation to report student achievement to students and parents.

(D) Is able to design and manage learning environments that provide students with the time, space, and resources needed for developing science skills. In doing this, one:

(i) Structures the time so that students are able to engage in extended investigations.

(ii) Creates a setting for student work that is flexible and supportive of science inquiry.

(iii) Ensures a safe working environment.

(iv) Makes the available science tools, materials, media, and technological resources accessible to students.

(v) Identifies and uses resources outside the school.

(vi) Engages students in designing the learning environment.

(E) Is able to develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the climate conducive to science learning. In doing this, one:

(i) Respects the diverse needs, skills, and experiences of all students.

(ii) Enables students to have a significant voice in decisions about the content and context of their work and prepares students to take responsibility for learning.

(iii) Encourages collaboration among students.

(iv) Structures and facilitates ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

(v) Models and emphasizes the skills and value of scientific inquiry.

(F) Is able to use a variety of instructional strategies and use integrated and interdisciplinary curriculum.

(G) Is able to teach with a broad understanding of all content areas and understands the interaction between the sciences and the process skills. Identified Physics concepts and content areas are:

(i) Motions and forces

(ii) Conservation of energy

(iii) Transfer of energy

(iv) Interactions of energy and matter

(H) Is able to develop conceptual understanding for science content using the process skills listed in Oklahoma's core curriculum, in Grades 6 through 12. Identified Science concepts and content areas are:

(i) System, order, and organization
(ii) Evidence, models, and explanation
(iii) Constancy, change, equilibrium, and measurement
(iv) Form and function
(v) Abilities of technological design
(vi) Understanding about science and technology
(vii) Science as a human endeavor
(viii) Nature of science
(ix) Nature of scientific knowledge
(x) History of science
(xi) Historical perspectives
(xii) Personal health
(xiii) Personal and community health
(xiv) Population, resources, and environments
(xv) Population growth
(xvi) Natural hazards
(xvii) Natural resources
(xviii) Risks and benefits
(xix) Environmental quality
(xx) Natural and human induced hazards
(xxi) Science and technology in society
(xxii) Science and technology in local, national, and global challenges

(30) **Social Studies.**

(A) United States History/Oklahoma History/government/economics. The candidate for licensure and certification:

(i) Knows the major themes of United States history and their interrelatedness.
(ii) Understands how the political growth, major events, and individuals affected the development of the United States.
(iii) Examines and analyzes historical documents which contributed to the establishment and growth of the government of the United States.
(iv) Identifies and describes events, trends, individuals, and movements which shaped the social, economic, and cultural development of the United States.
(v) Analyzes events and identifies individuals who defined and continue to impact the role of the United States in world affairs.
(vi) Knows the roles and function of government and the foundations, structure, and function of American government.
(vii) Identifies and explains the rights and responsibilities of citizens of the United States.
(viii) Describes the characteristics of local and state governments and the national government, and the relationships among the different levels of government.
(ix) Analyzes how the American political process works and the relationship of the process to the individual as a citizen of the state and the nation.
(x) Identifies and analyzes the events which led to Oklahoma's historical, political, economic, and cultural development.
(xi) Identifies important individuals and groups which have had an influence on Oklahoma's heritage.

(xii) Identifies the diverse geographic features and resources found in Oklahoma and describes their influence on Oklahoma's historical development and economy.

(xiii) Understands basic application of economic theories.

(xiv) Interprets economic trends in historical, political, and geographic contexts.

(xv) Analyzes the influence of the past on the present and uses a knowledge of history and government to anticipate and plan for the future, evaluating alternative courses of action.

(xvi) Applies the skills of analysis, interpretation, research, and decision-making to develop an understanding of history, government, and economic concepts.

(xvii) Knows the content of the Oklahoma core curriculum for United States History, Oklahoma History, government, and economics.

(B) World History/geography. The candidate for licensure and certification:

(i) Compares and contrasts differing sets of ideas, personalities, and institutions of world cultures and major historical periods.

(ii) Analyzes the cause and effect of relationships, multiple causation and perspectives, including the importance of the individual on historical events.

(iii) Analyzes the influence of the past on the present and uses a knowledge of history and geography to anticipate and plan for the future, evaluating alternative courses of action.

(iv) Interprets given historical data in order to evaluate information in its context.

(v) Knows the six elements of geographic organization: the world in spatial terms, places and regions, physical systems, human systems, environment and society, and application of geographic data, and applies them to developing an understanding of geography concepts.

(vi) Applies the skills of analysis, interpretation, research, and decision-making to develop an understanding of history and geographic concepts.

(vii) Knows the content of the Oklahoma core curriculum for World History and Geography.

(C) Psychology/sociology. The candidate for licensure and certification:

(i) Exhibits a basic intellectual grasp of psychological and sociological theories, vocabulary, history, and recent trends in the fields of psychology and sociology.

(ii) Understands basic concepts relative to social, developmental, abnormal and clinical psychology, learning theory (classical, operant, and cognitive), and other significant areas in the discipline of psychology, such as the scientific method.

(iii) Knows basic brain-based research and theory, and how biology and behavior interact.

(iv) Recognizes the differences among experimental, classical, and conditioning approaches to the study of psychology.

(v) Analyzes and interprets how today's psychologists view behavior in the following areas: the biological, the cognitive, the person-centered, and the psycho-dynamic perspectives.

(vi) Knows the theories and measurement of intelligence testing.

(vii) Knows basic concepts relative to group behavior, ethnicity, social mores, crime, demographics and current social issues.

(viii) Knows and analyzes culture, social structure, social stratification, social institutions, socialization, social movements, and social problems, as sociological concepts.

(ix) Knows and applies the basic sociological research processes, e.g., hypothesis formulations, sampling

(31) **Special Education (birth through twelfth grade).** For purposes of providing special education services and identifying competencies deemed necessary for licensure and certification, four areas of disabilities have been identified within the overall field of special education; these are Blind/Visual Impairment, Deal/Hard of Hearing, Mild-Moderate Disabilities, and Severe-Profound/Multiple Disabilities. Competencies identified at the early childhood level and deemed common to all areas of disabilities are addressed in (A) and apply to all candidates for licensure and certification in any area of special education. Additional competencies in each of the four areas listed above in this paragraph are addressed in (B) through (E).

(A) Competencies common to all areas of disabilities. The candidate for licensure and certification:

(i) Understands the historical, social, and ethical foundations; legal and regulatory; and current trends and issues of early childhood, early childhood special education, and special education.

(ii) Identifies specific/common disabilities in children and the implications for development and learning.

(iii) Plans and implements programming and curricula using current best practices and principles of early childhood education.

(iv) Understands typical and atypical development and the interdependency of all developmental areas, and respects each child's unique characteristics and their implications for learning.

(v) Demonstrates knowledge and skills in selection and administration of developmental screening, assessment, and evaluation instruments and methods which are comprehensive, nondiscriminatory for linguistic and cultural differences, formal and informal, and appropriate for children with early childhood disabilities.

(vi) Participates and collaborates with all team members in conducting the evaluation/assessment within the multidisciplinary team process.

(vii) Understands and demonstrates knowledge of the individualized family service plan (IFSP)/individualized education program (IEP) process by:

(I) using assessment results, in partnership with the family and other team members, to develop the IFSP/IEP

(II) monitoring IFSP/IEP progress

(viii) Understands and implements early childhood curricula by adapting educational strategies, schedules and environments (individual, group, home settings) to meet the specific needs, interests, and experiences of all children.

(ix) Understands and participates in the transition process across programs and service systems by:

(I) planning for and linking current developmental learning experiences and teaching strategies with those of the next educational setting

(II) communicating options for programs and services at the next level, while assisting the family in planning for transition.

(x) Develops and uses formative and summative program evaluation to ensure comprehensive quality of programs and services for children and their families.

(xi) Collaborates and consults regularly with families, other team members, and agencies to enhance and support children's learning and development by:

(I) assisting families in identifying resources, priorities, and concerns, and in accessing appropriate services

(II) respecting parents' choices and goals for their children

(III) implementing services for children and their families, consistent with laws, regulations, and procedural safeguards

(xii) Uses positive and supportive early childhood guidance, teaching, and behavioral strategies which help all children learn to make responsible decisions regarding their own behavior and contribute to the development of self-control, self-motivation, and self-worth.

(xiii) Demonstrates professionalism and ethical practice, including:

(I) advocacy on behalf of young children and their families to improve quality of programs and services for young children and for early childhood special education

(II) implementation of a professional development plan which incorporates best practices and principles.

(xiv) Understands and applies the following competencies in reading instruction.

(I) Knows the stages of language development and the structure of the English language and alphabetic writing system including phonology, morphology, and orthography and their relationships to spelling and meaning.

(II) Understands that primary language (oral) directly impacts the secondary languages (reading, writing, spelling). Knows and applies knowledge of implicit and explicit instruction in developing oral language. Knows the relationship of oral language to literacy.

(III) Knows the developmental process of reading in order to assess, interpret, describe, develop appropriate instruction, monitor, reteach and reassess student's reading performance for concepts about print, phonological and phonemic awareness, phonics, spelling, word recognition, vocabulary, comprehension, fluency, and writing.

(IV) Identifies and applies all developmental levels of phonemic awareness to provide appropriate instruction in understanding words are made up of phonemes and that phonemes can be rearranged and manipulated to make different words that compose oral speech.

(V) Knows and provides appropriate systematic explicit and implicit phonological instruction for the application of spelling-sound correspondences for word analysis and for structural analysis for word recognition and word meaning development.

(VI) Knows and applies the relationships between spelling patterns and sounds of speech; knows how to support the student at each stage of spelling development; knows how to focus direct and indirect instruction to guide the student toward spelling proficiency.

(VII) Knows and applies knowledge of appropriate explicit and implicit instruction for vocabulary development, e.g., prefixes, suffixes and roots.

(VIII) Knows and applies strategies that promote comprehension and strategies to support children's understanding for the various elements of the different genres of text.

(IX) Knows and applies strategies and instructional approaches to support response to text and promote comprehension for literal, inferential, and critical/evaluative level, e.g., guided reading, literature and research circles.

(X) Knows and applies knowledge of instructional techniques to assist students with self-monitoring and self-corrections, i.e., semantics, syntax, and graphophonics.

(XI) Knows and applies the instructional strategies which contribute to the development of fluent reading.

(XII) Knows how to promote children's interest and engagement in reading and writing.

(B) Blind/visual impairment. The candidate for licensure and certification:

(i) Understands the philosophical, historical, and legal foundations of special education for students with visual impairment including.

(I) trends and issues in special education

(II) special education policies and procedures

(III) laws and regulations regarding special education

(ii) Demonstrates knowledge of characteristics of students with visual impairments.

(iii) Demonstrates knowledge and skills in assessment, diagnosis, evaluation, and eligibility determination within the multidisciplinary team process for students with visual impairments including:

(I) procedures relevant to the impact of specific visual disorders on learning and experience, as well as procedures used for screening, prereferral, referral, and identification of students with visual impairments:

(II) vision screening methods

(III) functional vision assessment

(IV) learning media assessment

(V) orientation and mobility

(VI) independent living skills

(VII) vocational skills

(VIII) assistive technology

(IX) recreation and leisure skills

(X) classroom observation

(iv) Understands and demonstrates knowledge of the individualized education programs (IEP) process by:

(I) using assessment results, in partnership with team members, to develop the IEP

(II) monitoring IEP progress

(v) Demonstrates knowledge and skills to plan and implement appropriate and effective individualized education programs for students with visual impairments, based upon knowledge of subject matter and adaptation of curriculum and materials to meet individual abilities and sensory, conceptual and communication needs, including:

(I) social interaction skills

(II) recreation and leisure skills

(III) use of assistive technology

(IV) prerequisite skills and concepts for orientation and mobility instruction

(V) independent living skills
(VI) career education
(VII) visual efficiency skills
(VIII) literacy skills
(IX) organizational skills

(vi) Plans and manages supportive educational environments relative to the student's specific visual condition, including:

(I) acquisition and use of unique assistive technology (e.g., computers, printers, scanners, screen access, note-taking devices, software, speech output devices, CCTV, etc.)
(II) acquisition and use of specialized equipment and materials (Braille writer, abacus, slate and stylus, paper, Braille/large print/cassette textbooks, tactile maps, charts, graphs, optical, and nonoptical aids, etc.)
(III) modification of the physical environment
(IV) implementation of appropriate instructional strategies
(V) incorporation of basic orientation and mobility skills

(vii) Demonstrates knowledge and applies skills relative to the management of student behavior and social interaction skills unique to students with visual impairments, including:

(I) influences of the disability (ies) and other factors impacting the child's behavior and social skills
(II) instruction in social interaction skills, adaptive behavior, and appropriate behaviors
(III) appropriate behavior management and ethical considerations using a variety of interventions and techniques

(viii) Demonstrates knowledge and skills in communication and collaborative partnerships, including:

(I) communication with families, professionals, ancillary personnel, student peers, and community members to improve the quality of education for students with visual impairments
(II) interrelationships of resource and related service providers
(III) educational activities regarding specific visual conditions through inservice, consultation, etc.
(IV) transition planning

(ix) Demonstrates knowledge and skills to promote successful transitions at all levels of the education process and in various environments, including:

(I) completion of secondary level program/postsecondary planning
(II) transitions across programs and service delivery systems

(x) Demonstrates knowledge and skills in providing an appropriate education for students in the least restrictive environment, including the full continuum of placement alternatives

(xi) Demonstrates management skills pertaining to the various service delivery models representing the full continuum of placement options for students with visual impairments, including:

(I) time management and scheduling
(II) record keeping

(III) prioritizing caseload
(IV) roles and responsibilities
(V) travel issues relevant to service delivery
(VI) site specific climate and culture

(xii) Demonstrates professional and ethical conduct and advocacy for the unique needs of all students with visual impairments regardless of the availability of services.

(C) Deaf/hard of hearing. The candidate for licensure and certification:

(i) Understands the philosophical, historical, and legal foundations of special education for students who are deaf or hard of hearing, including:

(I) trends and issues in special education
(II) special education policies and procedures
(III) laws and regulations regarding special education

(ii) Demonstrates knowledge of characteristics and development of students who are deaf or hard of hearing, including:

(I) communication features (visual, spatial, tactile, auditory) necessary to enhance cognitive, emotional, and social development
(II) etiologies (causes) of hearing loss
(III) effects of onset, age of identification, and provision of services

(iii) Demonstrates knowledge and skills in assessment, diagnosis, evaluation, and eligibility determination within the multidisciplinary team process for students who are deaf or hard of hearing, including

(I) use of the natural/native/preferred language or mode of communication of the student
(II) interpretation of results for use in educational programming

(iv) Understands and demonstrates knowledge of the individualized education program (IEP) process by:

(I) using assessment results, in partnership with team members, to develop the IEP
(II) monitoring IEP progress

(v) Demonstrates knowledge and skills to plan and implement appropriate and effective instruction for students who are deaf or hard of hearing based upon knowledge of subject matter, curriculum goals, and students' individual abilities and needs by use of:

(I) multimedia skills
(II) techniques for modifying and adapting curriculum and materials to meet physical, sensory, cognitive, cultural, and communication needs in various learning environments

(vi) Plans and manages supportive teaching and learning environments that maximize opportunities for visually oriented and/or auditory learning and facilitate participation of students who are deaf or hard of hearing using:

(I) knowledge of current devices and assistive technology, including their application and resources (e.g., captioning, computers, augmentative communication devices, etc.)
(II) classroom management techniques

(vii) Demonstrates knowledge and skills in managing student behavior and social interaction skills, including:

(I) appropriate behavioral management and ethical considerations using a variety of interventions and techniques

(II) influences of the disability(ies) and other factors impacting the child's behavior and social interaction skills

(viii) Understands how language develops naturally and that early comprehensible communication influences the development of the whole child.

(ix) Demonstrates proficiency in the languages and modes of communication that are used in the instruction of students who are deaf or hard of hearing.

(x) Understands the social and cultural aspects of the deaf perspective and deaf experience.

(xi) Demonstrates knowledge and skills in communication and forming collaborative partnerships with families, professionals, and community members to improve the quality of education for students who are deaf or hard of hearing.

(xii) Demonstrates knowledge and skills to promote successful transitions at all levels of the education process and in various environments, including:

(I) completion of secondary level program/postsecondary planning

(II) transitions across programs and service delivery systems

(xiii) Demonstrates knowledge and skills in providing an appropriate education for students in the least restrictive environment, including the full continuum of placement alternatives.

(xiv) Demonstrates professional and ethical conduct in matters related to the education of students who are deaf or hard of hearing.

(D) Mild-moderate disabilities. The candidate for licensure and certification will demonstrate his/her mastery of these standards through the master of the Council for Exceptional Children's (CEC) Core Knowledge and Skills and through the mastery of the CEC Knowledge and Skill Base for Teachers of Students in Individualized General Curriculums. The candidate:

(i) Understands the philosophical, evidence-based principals and theories, historical and legal foundations of special education, and how these influence professional practices. These would include:

(I) trends and issues in special education;

(II) special education policies and procedures;

(III) laws and regulations regarding special education;

(IV) issues of human diversity and its relevance to special education;

(V) human issues that influence the field of special education; and

(VI) relationships of special education to the organization and functions of schools, school systems, and agencies.

(ii) Understands the similarities and differences in human development, the characteristics of all learners, and how exceptional conditions interact with the domains of human development to respond to varying abilities and behaviors of individuals with disabilities while demonstrating respect for their students.

(iii) Understands the effects that a disability (including aspects of cognition, communication, physical, medical, and social/emotional) can have on learning and how primary language, culture and familial background can interact with the student's disabilities to impact academic, and social abilities, attitudes, values, interests and career options. The understanding of these learning differences and their possible interactions provide the foundation upon which a special educator individualizes instruction to provide meaningful and challenging learning for students with disabilities.

(iv) Possesses a repertoire of evidenced-based instructional strategies to individualize instruction for students with disabilities and emphasizes the development, maintenance, and generalization of knowledge and skills across environments, settings, and the life span. These evidenced-based instructional strategies should:

(I) promote positive learning results in the general curriculum in age-appropriate settings;

(II) promote multiple methods for teaching reading;

(III) modify learning environments;

(IV) enhance critical thinking, problem solving and performance skills;

(V) promote self-determination;

(VI) enhance integration and coordination of related services for educational benefit; and

(VII) promote transition.

(v) Demonstrates knowledge and skills in creating positive and safe learning environments for students with disabilities, and that also foster active engagement of students with disabilities. In addition, special educators foster environments that:

(I) value diversity;

(II) promote independence and productivity;

(III) assist general education colleagues in integrating students with disabilities;

(IV) use direct motivational and instructional interventions;

(V) utilize positive behavior supports and crisis management techniques;

(VI) guide and direct paraprofessionals and others; and

(VII) provide specialized school health practices and techniques for health and safety.

(vi) Understands typical and atypical language development and uses strategies to enhance language development and teach communication skills to students with disabilities. This is accomplished by using:

(I) effective language models;

(II) augmentative, alternative and assistive technologies;

(III) communication strategies and resources to facilitate understanding of subject matter for students with disabilities and those students with disabilities whose primary language is not English; and

(IV) matching communication methods to the student's language proficiency and cultural and linguistic differences.

(vii) Develops long- and short-range instructional plans anchored in both general and special education curricula emphasizing:

(I) effective modeling;

(II) efficient guided practice;

(III) modifications based on ongoing analysis of the individuals learning progress;

(IV) collaboration;

(V) individualized transition plans;

(VI) use of appropriate technologies; and

(VII) positive behavior supports.

(viii) Understands legal policies and ethical principals of multiple types of assessment information related to referral, eligibility, program planning, instruction and placement of students with disabilities including those from culturally and linguistically diverse

backgrounds. Special educators use assessment information to identify supports and adaptations required for students with disabilities to access general and special curricula and participate in school, system and statewide assessment programs. Special educators regularly monitor students' progress and use appropriate technologies to support assessments. Special educators must understand:

(I) measurement theory and practices for addressing validity, reliability, norms, bias, and interpretation of assessment results and

(II) appropriate use and limitations of various assessment.

(ix) Demonstrates knowledge and skills regarding legal, professional, and ethical practices including:

(I) sensitivity to the many aspects of diversity;

(II) engaging in professional growth as lifelong learners;

(III) keeping current with evidence-based effective practices; and

(IV) participating in professional activities that benefit individuals with disabilities and their families.

(x) Routinely and effectively collaborates with families, colleagues, related service providers, community agencies and other resources in positive and culturally responsive ways to assure that the needs of students with disabilities are addressed including facilitation of successful transitions of students with disabilities across settings and services.

(E) Severe-profound/multiple disabilities. The candidate for licensure and certification will demonstrate his/her mastery of these standards through the mastery of the Council for Exceptional Children's (CEC) Core Knowledge and Skills and through the mastery of the CEC Knowledge and Skill Base for Teachers of Students in Independence Curriculums. The candidate:

(i) Understands the philosophical, evidence-based principals and theories, historical and legal foundations of special education, and how these influence professional practices. These would include:

(I) trends and issues in special education;

(II) special education policies and procedures;

(III) laws and regulations regarding special education;

(IV) issues of human diversity and its relevance to special education;

(V) human issues that influence the field of special education; and

(VI) relationships of special education to the organization and functions of schools, school systems, and agencies.

(ii) Understands the similarities and differences in human development, the characteristics of all learners, and how exceptional conditions interact with the domains of human development to respond to varying abilities and behaviors of individuals with disabilities while demonstrating respect for their students.

(iii) Understands the effects that a disability (including aspects of cognition, communication, physical, medical, and social/emotional) can have on learning and how primary language, culture and familial background can interact with the student's disabilities to impact academic, and social abilities, attitudes, values, interests and career options. The understanding of these learning differences and their possible interactions provide the foundation upon which a special educator individualizes instruction to provide meaningful and challenging learning for students with disabilities.

(iv) Possesses a repertoire of evidenced-based instructional strategies to individualize instruction for students with disabilities and emphasizes the development, maintenance, and generalization of knowledge and skills across environments, settings, and the life span. These evidenced-based instructional strategies should:

(I) promote positive learning results in general and special curricula in age-appropriate settings, especially functional curricula;

(II) modify learning environments;

(III) utilize community-based instruction and vocational instruction;

(IV) enhance communication skills;

(V) enhance critical thinking, problem solving and performance skills;

(VI) promote self-determination;

(VII) enhance integration and coordination of related services for educational benefit; and

(VIII) promote transition.

(v) Demonstrates knowledge and skills in creating positive and safe learning environments for students with disabilities, and that also foster active engagement of students with disabilities. In addition, special educators foster environments that:

(I) value diversity;

(II) promote independence and productivity;

(III) assist general education colleagues in integrating students with disabilities;

(IV) use direct motivational and instructional interventions;

(V) utilize positive behavior supports and crisis management techniques;

(VI) guide and direct paraprofessionals and others; and

(VII) provide specialized school health practices and techniques for health and safety.

(vi) Understands typical and atypical language development and uses strategies to enhance language development and teach communication skills to students with disabilities. This is accomplished by using:

(I) effective language models;

(II) augmentative, alternative and assistive technologies;

(III) communication strategies and resources to facilitate understanding of subject matter for students with disabilities and those students with disabilities whose primary language is not English; and

(IV) matching communication methods to the student's language proficiency and cultural and linguistic differences.

(vii) Develops long- and short-range instructional plans anchored in both general and special education curricula emphasizing:

(I) effective modeling;

(II) efficient guided practice;

(III) modifications based on ongoing analysis of the individuals learning progress;

(IV) collaboration;

(V) individualized transition plans;

(VI) use of appropriate technologies; and

(VII) positive behavior supports.

(viii) Understands legal policies and ethical principals of multiple types of assessment information related to referral, eligibility, program planning, instruction and placement of

students with disabilities including those from culturally and linguistically diverse backgrounds. Special educators use assessment information to identify supports and adaptations required for students with disabilities to access general and special curricula and participate in school, system and statewide assessment programs. Special educators regularly monitor students' progress and use appropriate technologies to support assessments. Special educators must understand:

(I) measurement theory and practices for addressing validity, reliability, norms, bias, and interpretation of assessment results and

(II) appropriate use and limitations of various assessments.

(ix) Demonstrates knowledge and skills regarding legal, professional, and ethical practices including:

(I) sensitivity to the many aspects of diversity;

(II) engaging in professional growth as lifelong learners;

(III) keeping current with evidence-based effective practices; and

(IV) participating in professional activities that benefit individuals with disabilities and their families.

(x) Routinely and effectively collaborates with families, colleagues, related service providers, community agencies and other resources in positive and culturally responsive ways to assure that the needs of students with disabilities are addressed including facilitation of successful transitions of students with disabilities across settings and services.

(32) **Speech/drama/debate (Secondary).** The candidate for licensure and certification:

(A) Maintains a current knowledge of concepts of the field of speech communication including: oral interpretation of literature, theater, the electronic media, public speaking, argumentation, and critical thinking skills.

(B) Applies comprehension, analysis, interpretation, synthesis, and evaluation of vocal, verbal and nonverbal messages.

(C) Applies appropriate learning strategies for critical thinking, research, organization, and presentation of messages appropriate to participation in a democratic society.

(D) Communicates effectively in interpersonal, small group, and public communication situations using appropriate language and nonverbal signals.

(E) Understands the influence of social and historical contexts, and culture on public address and literature of the theater.

(F) Understands the impact of cultural diversity upon the communication process.

(G) Establishes a communication climate which encourages reflection, creativity, and critical thinking.

(H) Uses differing assessment strategies to evaluate student competencies in a variety of speaking/listening situations.

(I) Uses technology (i.e., videotaping of presentations, computers to generate visual aids and as a research tool) to enhance instruction.

(J) Understands and uses teaching strategies appropriate for the analysis and presentation of a variety of forms (genres) of public address and literature of the theater, available in electronic media and from printed sources.

(K) Understands the importance of effective communication skills in the personal and professional arenas.

(L) Understands the role of co-curricular and extracurricular activities in the development of student interest as an extension of the classroom instruction.

(M) Understands, teaches, and implements Oklahoma's Core Curriculum.

(33) **Speech-language pathologist~~.~~ (SLP).**

(A) The candidate for licensure and certification:

(i) Understands the models, theories and philosophies that provide the basis for the practice of ~~speech/language~~speech-language pathology, in the following knowledge areas:

(I) content areas in ~~speech/language~~speech-language pathology (language, articulation, voice, fluency, augmentative communication)

(II) etiologies which may contribute to communication impairments

(III) a working understanding of other assessments (medical, psychological, audiological, etc.)

(IV) modality (spoken, written, sign)

(ii) Accommodates the individual learning styles and communication/educational needs of the student.

(iii) Demonstrates the ability to screen, evaluate, and diagnose students with suspected communication impairments using a variety of formal and informal procedures.

(iv) Plans and implements evidence based intervention strategies and the appropriate service delivery models for students with communication impairments, including:

(I) determines least restrictive environment

(II) provides ongoing assessment and monitors individualized education program (IEP) progress

(III) develops individualized education program (IEP)

(v) Facilitates the development of the student's functional and literate communication skills (i.e., how communication occurs including written language) across environments, including:

(I) developing modifications/adaptations

(II) determining transition service needs

(vi) Recognizes and understands the relationship among behavior, social interaction and communication impairments, and is able to determine realistic expectations for the student's personal and social behavior in various settings.

(vii) Uses collaborative strategies in working with parents, school, and community to address the needs of students with communication impairments.

(viii) Promotes and maintains competence and integrity in the practice of ~~speech/language~~speech-language pathology ~~as follows:~~

~~(I) develops a plan for professional development~~

~~(II) identifies community agencies and resources~~ by participating in continuing education as required to maintain professional licensure, national certification, and/or Oklahoma State Department of Education (OSDE) certification, as well as by identifying community agencies and resources for students.

(ix) Implements practices that recognize the multicultural issues and the effect of cultural and linguistic diversity on students' communication skills and learning styles.

(x) Demonstrates knowledge of laws and regulations pertaining to students with communication impairments.

(xi) Defines, describes, and implements tenets of professional services that include

interprofessional practices (IPP).

(xii) Knows the requirements for supervision of student interns, speech-language pathology assistants, and the mentorship of clinical fellows.

(B) Competency for Speech-language Pathologist certification may also be verified by the Certificate of Clinical Competence (C.C.C.) from the American Speech-Language-Hearing Association (ASHA). or Oklahoma Board of Examiners for Speech-Language Pathology and Audiology (OBESPA) licensure.

(34) **Speech-language pathology assistant (SLPA).**

(A) The candidate for licensure and certification:

(i) Understands the models, theories and philosophies that provide the basis for the practice of speech/language pathology, in the following knowledge areas:

(I) content areas in speech-language pathology (language, articulation, voice, fluency, augmentative communication, swallowing)

(II) etiologies which may contribute to communication impairments

(III) a working understanding of other assessments (medical, psychological, audiological, etc.)

(IV) modality (spoken, written, sign)

(ii) Accommodates the individual learning styles and communication/educational needs of the student.

(iii) Demonstrates the ability to assist the speech-language pathologist in screening and assessing students with suspected communication impairments using a variety of formal and informal procedures.

(iv) Implements evidence based intervention strategies developed by the supervising speech-language pathologist, and appropriate service delivery models for students with communication impairments, including:

(I) provides ongoing data collection and monitors individualized education program (IEP) progress

(II) develops IEP with prior approval of the licensed speech-language pathologist

(v) Facilitates the development of the student's functional and literate communication skills (i.e., how communication occurs, including written language) across environments and provides modifications/adaptations.

(vi) Recognizes and understands the relationship among behavior, social interaction and communication impairments, and is able to provide realistic expectations for the student's personal and social behavior in various settings.

(vii) Uses collaborative strategies in working with parents, school, and community to address the needs of students with communication impairments.

(viii) Promotes and maintains competence and integrity in the practice of speech-language pathology by participating in continuing education as required to maintain professional license and Oklahoma State Department of Education (OSDE) certification or credential.

(ix) Implements practices that recognize multicultural issues and the effect of cultural and linguistic diversity on students' communication skills and learning styles.

(x) Defines, describes, and implements tenets of professional services that include interprofessional practices (IPP).

(xi) Demonstrates knowledge of laws and regulations pertaining to students with communication impairments.

(xii) Knows and adheres to SLPA roles and responsibilities as defined in licensure and certification rules and regulations.

(B) Competency for Speech-Language Pathology Assistant certification or credential shall be verified by the Oklahoma Board of Examiners for Speech-Language Pathology and Audiology (OBESPA) and the successful passing of the Oklahoma exam for SLPAs or a national exam for SLPAs when available. An SLPA must work under the direct and indirect supervision of a licensed/certified speech-language pathologist (SLP) to be eligible for certification. The SLPA will not independently give assessments and will not determine eligibility for services. Responsibilities will be assigned by the supervising speech-language pathologist based on the SLPA's level of competence in each area.

~~(34)~~(35) **Agricultural education.** The candidate for licensure and certification shall possess the competencies specified in (A) through (F).

(A) **Agricultural business/marketing.** The candidate for licensure and certification understands the fundamental principles of agricultural business/marketing and management including principles of basic recordkeeping and methods for acquiring and managing agricultural finances.

(B) **Animal science.** The candidate for licensure and certification:

(i) Selects and handles livestock, recognizes factors related to the safe handling of animals and animal products which become food for human consumption, and understands the importance of alternative agricultural enterprises.

(ii) Understands concepts and principles of animal reproduction and the importance of livestock health and nutrition.

(C) **Plant and soil science.** The candidate for licensure and certification:

(i) Understands concepts, principles, and laboratory skills related to plant and soil science including the importance of traditional crops and alternative enterprises.

(ii) Knows factors related to the safe handling of plants and plant products which become food for human consumption and identifies causes and characteristics of common plant pests and diseases.

(D) **Agricultural mechanics.** The candidate for licensure and certification practices:

(i) shop safety, including the operation and knowledge of hand/power tools,

(ii) basic principles/concepts of power and machinery, metals and metal processes, and

(iii) basic principles of building construction.

(E) **Natural resources.** The candidate for licensure and certification:

(i) Evaluates the relationship between agriculture and the management of water, land, and air quality, and

(ii) Understands concepts and principles of plant and animal environmental factors including the handling of chemicals.

(F) **Communications/leadership.** The candidate for licensure and certification:

(i) Acknowledges the foundations of agricultural education including its purpose, functions, and the background of Future Farmers of America (FFA).

(ii) Demonstrates an understanding of basic parliamentary procedure, effective oral and written communication skills, and promotes teamwork, motivation, and leadership principles.

~~(35)~~(36) **Marketing education.** The candidate for licensure and certification shall possess the competencies specified in (A) through (N).

(A) **Orientation.** The candidate for licensure and certification applies principles of job search and preparation skills relating to resume and portfolio development, proper completion of application forms, interview preparation, career ladder analysis, and computer technology skills relating to word-processing and computerized presentations.

(B) **Marketing.** The candidate for licensure and certification:

(i) Applies principles and concepts related to marketing.

(ii) Interprets the importance of the marketing concept and functions, how marketing affects society, factors to consider in selecting a channel of distribution, and the concept of target marketing.

(C) **Mathematical skills.** The candidate for licensure and certification:

(i) Applies basic mathematical operations used in the marketing profession as it pertains to balancing a cash drawer and the automatic and manual methods of making change.

(ii) Identifies the uses of basic algebra in marketing.

(D) **Human relations.** The candidate for licensure and certification:

(i) Applies principles of communications, decision-making, and crisis management.

(ii) Identifies characteristics of professionalism on the job and the importance of social skills.

(E) **Sales.** The candidate for licensure and certification:

(i) Applies principles relating to sales, product information, customer buying decisions, motives for buying, and sales approaches.

(ii) Demonstrates methods of handling customer/client complaints and objections.

(iii) Explains the concept and use of sales quotas.

(F) **Security precautions.** The candidate for licensure and certification:

(i) Identifies and explains prevention measures for the security problems of shoplifting, internal theft, burglary, robbery, and fraud.

(ii) Identifies common types of fraud.

(iii) Recognizes steps necessary to ensure security in shipping and receiving areas.

(iv) Identifies precautions for safety on the job.

(G) **Economics.** The candidate for licensure and certification:

(i) Applies principles related to the classification of goods and services and the types of economic resources.

(ii) Compares the types of economic systems and their relationship to the economy.

(iii) Identifies the factors which affect economics including economic utility (form, place, time, possession), competition, supply and demand, and the role of government in business.

(iv) Understands the characteristics and importance of a private enterprise system and international trade.

(v) Identifies the measure and importance of the gross domestic product (GDP) to marketing.

(H) **Promotion.** The candidate for licensure and certification:

(i) Applies principles related to the use of promotional activities, including the use of media, design and display arrangements, and the print ad.

(ii) Explains the role of the promotional plan.

(I) **Merchandising.** The candidate for licensure and certification applies principles related to shipping and receiving, inventory control systems, calculation of inventory shrinkage, and industrial purchasing.

(J) **Business ownership/entrepreneurship.** The candidate for licensure and certification:

(i) Identifies the common types of business ownership in a free enterprise system and the advantages/disadvantages of each.

(ii) Discusses the importance of marketing strategies to businesses as they apply the principles of the product mix, product/service planning, marketing decisions for a proposed business, structuring a business, and using four "Ps" of marketing - product, pricing, place, and promotional strategies.

(K) **Applied management.** The candidate for licensure and certification:

(i) Applies principles of selecting store personnel, recruiting applicants for job openings, interviewing job candidates, and reducing labor turnover.

(ii) Recognizes the importance of new-employee orientation.

(iii) Understands knowledge of employee motivational theories.

(L) **Credit.** The candidate for licensure and certification:

(i) Applies principles of extending credit to business and customers and the three Cs of credit: character, capacity to pay, and capital.

(ii) Identifies the reasons for extending credit.

(M) **Business and industry.** The candidate for licensure and certification:

(i) Develops relationships with business and industry through advisory committees, surveys, work-site learning opportunities, curriculum, and program visits.

(ii) Communicates with business and industry regarding student competencies/credentials and job performance.

(N) **Student organizations and activities.** The candidate for licensure and certification:

(i) Understands the role of student organizations in developing student professionalism and assists student organizations by coaching, chaperoning, and supervising activities.

(ii) Encourages student participation through instruction and recognition of student achievements.

~~(36)~~(37) **Technology engineering.** The candidate for licensure and certification shall possess the competencies specified in (A) through (J):

(A) **Fundamentals of technology.** The candidate for licensure and certification:

(i) Understands the historical and social content including important events, developments, components, and current and future trends of technology.

(ii) Defines the terms, systems, characteristics, interrelationships, and economics of the connection between other disciplines such as math, science, and engineering.

(iii) Identifies general laboratory and personal safety practices.

(iv) Understands process and procedures related to the design process.

(B) **Problem-solving techniques.** The candidate for licensure and certification:

(i) Understands and applies problem-solving techniques.

(ii) Applies knowledge of engineering to solve technology related problems.

(C) **Career opportunities.** The candidate for licensure and certification:

(i) Explores career opportunities based on career clusters and identifies related terms and definitions.

(ii) Identifies activities that develop employability skills.

(iii) Recognizes educational requirements and pathways for occupational or postsecondary attainment.

(D) **Arts/AV communication and information technology systems.** The candidate for licensure and certification:

(i) Understands the principles, processes, tools, equipment, materials, functions, and characteristics of Arts/AV and Communication Technologies.

(ii) Understands Information Techology processes and procedures related to graphic communications.

(E) **Architecture and Construction systems.** The candidate for licensure and certification:

(i) Understands and applies the principles and characteristics of architecture and construction.

(ii) Identifies architecture and construction processes, procedures, basic principles of project planning, legal and regulatory issues, equipment and materials, and steps in the construction process.

(F) **Manufacturing systems.** The candidate for licensure and certification:

(i) Understands manufacturing principles and characteristics and their application.

(ii) Identifies materials, equipment, processes, and strategies utilized in manufacturing technologies.

(iii) Analyzes the role, function, and responsibilities of manufacturing in a contemporary society.

(G) **Transportation, distribution, and logistics (TDL).** The candidate for licensure and certification:

(i) Understands the principles, procedures, and applications of transportation, distribution, and logistics.

(ii) Identifies the selection of tools, equipment, and materials in the transportation, distribution, and logistics industry.

(iii) Analyzes environmental and economic effects on society.

(H) **Technology engineering delivery systems.** The candidate for licensure and certification:

(i) Understands basic technology engineering principles, terminology, system design, and issues related to technology engineering.

(ii) Identifies terms, features, relationships, and procedures related to the selection, operation, and maintenance of computer systems and technology engineering software.

(iii) Analyzes factors effecting the selection of computer hardware and software.

(I) **Business and industry.** The candidate for licensure and certification develops relationships with business and industry through advisory committees, curriculum, and work-site learning opportunities.

(J) **Student organizations and activities.** The candidate for licensure and certification:

(i) Understands the role of student organizations in encouraging student participation and implementing activities that develop leadership traits.

(ii) Integrates student activities in instruction and recognizes student achievements.

~~(37)~~(38) **Vocational business.** The candidate for licensure and certification shall possess competencies specified in (A) through (D).

(A) **Business foundations.** The candidate for licensure and certification:

(i) Understands important events, developments and trends in the history of business.

(ii) Understands business organizational structures, organizational design and their implications.

(iii) Understands the basic principles of business law and the types and characteristics of legal instruments.

(iv) Analyzes legal issues related to business.

(v) Understands business communication.

(B) **Business management.** The candidate for licensure and certification:

(i) Understands principles of business management and their applications in the decision-making process

(ii) Applies procedures for managing human resources.

(iii) Analyzes issues related to economic and social responsibilities in business.

(iv) Analyzes factors affecting business marketing decisions.

(C) **Technology systems.** The candidate for licensure and certification:

(i) Understands basic principles and terminology related to computer technology.

(ii) Understands principles of computer system design.

(iii) Applies principles of computer technology to solve problems involving information gathering and analysis.

(iv) Applies principles of computer technology to solve problems related to project and business management.

(v) Understands information processing systems.

(vi) Analyzes data storage, retrieval and transmission systems.

(vii) Understands principles of telecommunications and applications of telecommunications in business.

(viii) Analyzes ethical and security issues involving technology systems.

(D) **Business finance and economics.** The candidate for licensure and certification:

(i) Understands basic principles and applications of accounting.

(ii) Applies procedures for processing accounting data.

(iii) Understands advanced accounting concepts and procedures.

(iv) Understands basic principles and applications of macroeconomics.

(v) Analyzes business situations in terms of microeconomic theory.

(vi) Applies basic principles of consumer economics and finance.

~~(38)~~(39) **Vocational family and consumer sciences.** The candidate for licensure and certification shall possess the competencies specified in (A) through (I).

(A) **Child development.** The candidate for licensure and certification:

(i) Applies child development concepts and guidance techniques in the care of infants, toddlers, preschool and school-age children, as well as children in crisis or with special needs.

(ii) Analyzes issues related to children's well-being, parenting, pregnancy, prenatal care, child birth, child care services, and community resources.

(B) **Foods and nutrition.** The candidate for licensure and certification:

(i) Analyzes the relationship between food, nutrients, and the body through the application of food science principles, and healthy food choices.

(ii) Understands proper food storage/handling techniques, recipe use, food product information, serving/dining etiquette, and consumer skills.

(C) **Consumer economics and management.** The candidate for licensure and certification:

(i) Applies principles related to money management, personal financial management, time management, and economics.

(ii) Analyzes advertising influences, factors related to housing selection and maintenance, factors related to motor vehicle selection and maintenance, wills, funerals, and consumer credit.

(iii) Applies consumer protection practices and skills.

(D) **Housing and interior design.** The candidate for licensure and certification:

(i) Plans living space for human needs through the evaluation of housing and financial alternatives.

(ii) Applies elements and principles of interior design including exterior styles, interior spaces, interior treatments, furniture, accessories, and appliances.

(E) **Interpersonal relationships.** The candidate for licensure and certification:

(i) Applies principles of communications, decision making, and crisis management.

(ii) Discusses factors and issues related to parenting, family life, and aging.

(iii) Identifies the importance of self-respect and of practicing socially accepted behavior.

(F) **Clothing and textiles.** The candidate for licensure and certification:

(i) Applies wardrobe planning and grooming skills.

(ii) Applies clothing selection skills, methods of stretching the clothing dollar, care and maintenance practices, construction techniques, and knowledge of types of textiles.

(G) **Careers.** The candidate for licensure and certification:

(i) Investigates careers as they relate to personal and career goals.

(ii) Understands the job application process, factors related to work etiquette, the use of technology in the workplace, and economic principles.

(H) **Business and industry.** The candidate for licensure and certification:

(i) Develops partnerships with business and industry through advisory committees, surveys, work-site learning opportunities, curriculum, and program visits.

(ii) Communicates with business and industry regarding student competencies/credentials and job performance.

(I) **Student organizations and activities.** The candidate for licensure and certification:

(i) Understands the role of student organizations in the recognition of student achievements through curricular activities.

(ii) Encourages student participation and the development of leadership traits.

~~(39)~~(40) **Occupational agriculture, occupational family and consumer sciences, trade and industrial education, and vocational health occupations.** Competency for occupational agriculture, occupational family and consumer sciences, trade and industrial education, and vocational health occupations will be verified by passing a state or national licensure examination developed specifically to the occupation and/or occupational testing approved by the Oklahoma Department of Vocational and Technical Education. Non-degreed vocational teachers certified under rules promulgated by the State Board of Education are exempt from the provisions of House Bill 1549, except for those provisions concerning professional development programs.

~~(40)~~(41) **Dance education.** The candidate for licensure and certification:

(A) Has a sound philosophical understanding and knowledge of dance education and creative movement and can support, justify and implement the dance education.

(B) Has a thorough knowledge of a sequential dance/creative movement curriculum that is developmentally appropriate for each grade level and inclusive of various student learning styles and those with special needs.
(C) Understands the history of dance and its role in culture and the arts worldwide.
(D) Has a working knowledge of dance integration and values the art-related competencies in Oklahoma's core curriculum.
(E) Recognizes and respects diversity and establishes environments where individuals dance content and learning are held in high regard.
(F) Understands the process of critical thinking and implements problem solving activities, analysis, reflection, decision making and creative exploration in dance.
(G) Understands the elements of dance and technical skills in performing dance including:
- (i) time (i.e., fast slow, even, uneven, accent, meters)
- (ii) space (i.e., levels , direction, pathways)
- (iii) force (i.e., energy, weight, flow)
- (iv) locomotor movements (i.e., walk, run, skip, hop, jump, slide, gallop, leap)
- (v) nonlocomotor movements (i.e., bend, stretch, twist, swing)
- (vi) rhythmic activities and musicality
- (vii) proper skeletal alignment
- (viii) efficiency and mastery of technical skills in a variety of dance forms.

(H) Understands the principals of choreography (i.e., dance improvisation, composition, and choreography).
(I) Understands the components of healthy living and fitness and the benefits of daily participation in dance activities.
- (i) fitness components
  - (I) flexibility
  - (II) muscular strength
  - (III) agility
  - (IV) motor skills development and coordination
  - (V) body awareness, control, and balance
  - (VI) development and mastery of dance skills
  - (VII) weight control
- (ii) wellness components
  - (I) release of stress and tension through positive dance activity
  - (II) positive self esteem and self-expression
  - (III) lifelong well being
  - (IV) weight control

(J) Has a working knowledge of dance choreography and teaching strategies to help students create, study, interpret and evaluate works of art.
(K) Has knowledge of dance resources including community resources, materials, equipment, and proper facilities, and can adapt a variety of resources and materials that supports students as they learn through and about dance.
(L) Promotes the understanding of dance as an artistic, kinesthetic, educational, social, cultural and theatrical experience.
(M) Provides a safe environment and creates a setting for productive learning.
(N) Collaborates with colleagues, artists and agencies in the community to promote arts education opportunities.

(O) Recognizes the important role of technology in dance education.

(P) Uses a variety of assessment and evaluation methods and can evaluate student learning.

~~(41)~~(42) **English as a second language (ESL) PK-12.** The candidate for licensure and certification:

(A) **Language.** The candidate for licensure and certification:

(i) Demonstrates knowledge, understanding, and application of the fundamentals of linguistics as related to the development of listening, speaking, reading, and writing for social and academic purposes.

(ii) Understands and applies knowledge of current theories and practices that facilitate second language acquisition and literacy development in the classroom.

(iii) Understands the role of the primary language in acquiring English as a new language.

(iv) Understands and applies knowledge of how sociocultural variables effect individual learners in facilitating the process of learning English.

(B) **Culture.** The candidate for licensure and certification:

(i) Knows, understands, and uses the major concepts, principles, theories, and research related to the nature and role of culture in language development and academic achievement that support individual student's learning.

(ii) Understands and applies knowledge about home/school communication to enhance ESL teaching and build partnerships with students' families.

(iii) Knows, understands, and uses knowledge of how cultural groups and ESL students' cultural identities affect language learning and school achievement.

(iv) Understands and applies knowledge about world events that have an impact on ESL students' learning.

(v) Knows and uses teaching strategies that are developmentally appropriate and inclusive of various learning styles and is sensitive to the needs of diverse cultural groups.

(C) **Planning, implementation, and managing instruction.** The candidate for licensure and certification:

(i) Knows, understands, and applies concepts, research, and best practices to plan standards-based instruction based on language development and the Oklahoma core curriculum that provides for students of varying educational backgrounds in a supportive and accepting environment.

(ii) Knows, manages, and implements instruction around standards-based subject matter and language learning objectives that incorporates a variety of activities and learning opportunities that integrate listening, speaking, reading, writing, and comprehension for a variety of academic and social purposes.

(iii) Knows and is able to use a variety of resources and instructional strategies to teach ESL students the English language and content areas.

(iv) Understands and applies the following competencies in reading instruction as appropriate to the abilities of the student.

(I) Knows the stages of language development and the structure of the English language and alphabetic writing system including phonology, morphology, and orthography and their relationships to spelling and meaning.

(II) Understands that primary language (oral) directly impacts the secondary languages (reading, writing, spelling). Knows and applies knowledge of implicit and

explicit instruction in developing oral language. Knows the relationship of oral language to literacy.

(III) Knows the developmental process of reading in order to assess, interpret, describe, develop appropriate instruction, monitor, reteach and reassess student's reading performance for concepts about print, phonological and phonemic awareness, phonics, spelling, word recognition, vocabulary, comprehension, fluency, and writing.

(IV) Identifies and applies all developmental levels of phonemic awareness to provide appropriate instruction in understanding words are made up of phonemes and that phonemes can be rearranged and manipulated to make different words that compose oral speech.

(V) Knows and provides appropriate systematic explicit and implicit phonological instruction for the application of spelling-sound correspondences for word analysis and for structural analysis for word recognition and word meaning development.

(VI) Knows and applies the relationships between spelling patterns and sounds of speech; knows how to support the student at each stage of spelling development; knows how to focus direct and indirect instruction to guide the student toward spelling proficiency.

(VII) Knows and applies knowledge of appropriate explicit and implicit instruction for vocabulary development (e.g., prefixes, suffixes, roots, singular, and plural).

(VIII) Knows and applies strategies that promote comprehension and strategies to support children's understanding for the various elements of the different genres of text.

(IX) Knows and applies strategies and instructional approaches to support response to text and promote comprehension for literal, inferential, and critical/evaluative level (e.g., guided reading, literature and research circles).

(X) Knows and applies knowledge of instructional techniques to assist students with self-monitoring and self-corrections (i.e., semantics, syntax, and graphophonics).

(XI) Knows and applies the instructional strategies which contribute to the development of fluent reading.

(XII) Knows how to promote children's interest and engagement in reading and writing.

(D) **Assessment.** The candidate for licensure and certification:

(i) Understands various issues of standardized assessments as they affect ESL students' learning and academic performance.

(ii) Understands different types of assessments and their purposes.

(iii) Understands and is able to use a variety of language proficiency assessment instruments.

(iv) Interprets and integrates assessment information into instructional plans.

(v) Understands the importance of different assessment strategies and uses them in the evaluation and modification of teaching and learning.

(E) **Professionalism.** The candidate for licensure and certification:

(i) Demonstrates knowledge of history, research, and current practices in the field of ESL and applies this knowledge to improve teaching and student achievement.

(ii) Pursues personal professional growth opportunities and serves as a professional resource to colleagues.

(iii) Serves as a resource liaison and advocate for ESL students and builds partnerships with students' families.

(iv) Demonstrate English fluency in listening, speaking, reading, and writing the English language.

~~(42)~~(43) **Computer Science.** The candidate for licensure and certification shall possess the competencies specified in (A) through (E).

(A) **Programming and algorithm design.** The candidate for licensure and certification will demonstrate programming proficiency in a modern high-level programming language. The candidate will:

(i) Demonstrate knowledge of and skill regarding the syntax and semantics of a high-level programming language, its control structures, and its basic data representations.

(ii) Demonstrate knowledge of and skill regarding common data abstraction mechanisms (e.g., data types or classes such as stacks, trees, lists, etc.).

(iii) Demonstrate knowledge of and skill regarding program correctness issues and practices (e.g., testing program results, test data design).

(B) **Multiple paradigms.** The candidate for licensure and certification will demonstrate an understanding of and flexibility with differing approaches/paradigms in programming (e.g., imperative, functional, object-oriented). The candidate will design, implement, and test programs in languages from two different programming paradigms in a manner appropriate to each paradigm.

(C) **Computer systems - components, organization, and operation.** The candidate for licensure and certification will demonstrate in-depth knowledge of how computer systems work individually and collectively. The candidate will:

(i) Use a variety of computing environments (e.g., various operating systems)

(ii) Describe the operation of a computer system-CPU and instruction cycle, peripherals, operating system, network components, and applications indicating their purposes and interactions among them.

(D) **Data representation and information organization.** The candidate for licensure and certification will demonstrate an understanding of data and information representation and organization at a variety of levels--machine level representation (for program correctness), data structures (for program implementation), problem representation (for solution design), files and databases (for general applications), and interactions among systems and people (for overall system design and effectiveness). The candidate will:

(i) Describe how data is represented at the machine level (e.g., character, boolean, integer, floating point).

(ii) Identify and provide usage examples of the various data structures and files provided by a programming language (e.g., objects, various collections, files).

(iii) Describe the elements (people, hardware, software, etc.) and their interactions within information systems (database systems, the Web, etc.).

(E) **Social aspects of computing.** The candidate for licensure and certification will conduct independent learning on specific, unfamiliar topics in general areas central to computer science and provide their candidates with opportunities to do the same. The candidate will:

(i) Demonstrate awareness of social issues related to the use of computers in society and principles for making informed decisions regarding them (e.g., security, privacy, intellectual property, equitable access to technology resources, gender issues, cultural diversity, differences in learner needs, limits of computing, rapid change).

(ii) Analyze various social issues involving computing, producing defensible conclusions.
(iii) Demonstrate an understanding of significant historical events relative to computing.