Stephen F. Austin State University
Curriculum Alignment Charts
Elementary Education Master's Program with Initial Certification in Grades 4-8
Fall 2018

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Noted in red on the alignment charts are standards where TEKS are taught, by course. Syllabi reference more how they are taught and assessed.

For Charts 5-8, please note the following response from Sandra Nix on March 25, 2014 regarding the use of the PACT Test for admission to program:

Since many of the alternative and post bac programs are transitioning to the use of the PACT test as a requirement for admission, I wanted to refresh everyone's memory about the proper use of the PACT. The PACT test must be taken prior to application and formal admission into the EPP. If a candidate is interested in your program, provide them information about where and how to PACT but do not accept an application or take any money. When the candidate brings you their PACT results, then you may provide them an application and start the admissions process. **The advantage to using the PACT is that the candidate has already proved content proficiency and the EPP is only responsible for providing the PPR portion of preparation. The results of their PACT have no affect on your pass rate for accountability purposes. If you choose to not use the PACT for admission into your EPP, you are responsible for providing the candidate with content preparation for the area where he/she will be certified.**

4-8 TEKS SYSTEM COURSE ALIGNMENT {N-None; I = Introduced (first time students have seen; initial teaching); M=Maintained (responsible for all that was taught)}

Marking content listed below means that the content is contained in the course and assessed in the course.	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**ELE 584**
CURRICULUM ALIGNMENT – Knowledge, Comprehension, Appl8cation							
Definition of curriculum alignment (State Standards to Instruction to State Assessment)?	I	M	M	M	M		
Definition of lesson alignment (Learning Objective to Strategies & Activities to Assessment)?	I	M	M	M			
Definition of vertical (across grade levels) and horizontal alignment (among teachers at a grade level)?							
CURRICULUM STANDARDS – Knowledge, Comprehension, Appl8cation							
Standards definition – The "WHAT" you teach based on TEKS.	I	M	M	M			
The "what" (TEKS)	I	M	M	M			
TEKS (how do you locate, arranged by chapters, TEKS-Related documents)	I	M	M	M			
Definition and Purpose of College Readiness Standards (embedded in the TEKS), Readiness, & Supporting Standards & where to locate – lead4ward	I	M	M	M			
UNDERSTANDING THE TEKS ORGANIZATION AND STRUCTURE – Knowledge, Comprehension, Appl8cation							
TEKS document Organization (introduction, Knowledge and Skills, Student Expectations)	I	M	M	M			
Knowledge and Skills what teachers teach when no student expectations are listed(student expectations or last sentence of Knowledge and Skills statements when no expectations listed)	I	M	M	M			
Define and label the TEKS Structure (Strand, Knowledge & Skill Statements, Student Expectations)	I	M	M	M			
Goal definition and relationship to Knowledge and Skill Statements	I	M	M	M			
Objective definition and relationship to Student Expectations	I	M	M	M			
UNDERSTANDING THE VERBS & COGNITIVE RIGOR – Knowledge, Comprehension, Application							
Bloom's Taxonomy (levels, definition of levels, verbs, products)(Bloom, 1956; Anderson & Krathwohl, 2001)	I	M	M	M			
Alignment of TEKS verbs and levels of thinking according to Bloom's	I	M	M	M			
Bloom's and Product Alignment	I	M	M	M			
TEKS IDENTIFICATION FOR LESSON PLANNING – Knowledge, Comprehension, Application							
TEKS ID Notification System	I	M	M	M			
Noting TEKS on Lesson Plans	I	M	M	M			
LEARNING OBJECTIVES – Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation							
Verb, Content/Context from the TEKS and determining the Product –Products align to the Verbs, Lesson Assessment	I	M	M	M			
Learning Objective Template	I	M	M	M			
ELPS – Knowledge, Comprehension, Application, Analysis, Evaluation							
ELPS Organization	I	M	M	M			
Noting ELPS in the Lesson Plan	I	M	M	M			
ELPS & Accommodations	I	M	M	M			
Language Objective Template	I	M	M	M			

Stephen F. Austin State University

James I. Perkins College of Education

Commissioner Rules Educator Standards [Titled Teaching Standards (TS) in ELE ED Syllabi]

4/8 - Program Overview – Matrix

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
Standard 1--Instructional Planning and Delivery. Teachers demonstrate their understanding of instructional planning and delivery by providing standards-based, data-driven, differentiated instruction that engages students, makes appropriate use of technology, and makes learning relevant for today's learners.								
1(A) Teachers design clear, well organized, sequential lessons that build on students' prior knowledge.								
1A(i) Teachers develop lessons that build coherently toward objectives based on course content, curriculum scope and sequence, and expected student outcomes		X	X	X				X
1A(ii) Teachers effectively communicate goals, expectations, and objectives to help all students reach high levels of achievement.		X	X	X				X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
1A(iii) Teachers connect students' prior understanding and real-world experiences to new content and contexts, maximizing learning opportunities.		X	X	X				X
1(B) Teachers design developmentally appropriate, standards-driven lessons that reflect evidence-based best practices.								
1B(i) Teachers plan instruction that is developmentally appropriate, is standards driven, and motivates students to learn.		X	X	X				X
1B(ii) Teachers use a range of instructional strategies, appropriate to the content area, to make subject matter accessible to all students.		X	X	X				X
1B (iii) Teachers use and adapt resources, technologies, and standards-aligned instructional materials to promote student success in meeting learning goals.		X	X	X				X
1(C) Teachers design lessons to meet the needs of diverse learners, adapting methods when appropriate.								
1C (i) Teachers differentiate instruction, aligning methods and techniques to diverse student needs, including acceleration, remediation, and implementation of individual education plans.		X	X	X				X
1C(ii) Teachers plan student groupings, including pairings and individualized and small-group instruction, to facilitate student learning.		X	X	X				X
1C (iii) Teachers integrate the use of oral, written, graphic, kinesthetic, and/or tactile methods to teach key concepts.		X	X	X				X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
1(D) Teachers communicate clearly and accurately and engage students in a manner that encourages students' persistence and best efforts.								
1D (i) Teachers ensure that the learning environment features a high degree of student engagement by facilitating discussion and student-centered activities as well as leading direct instruction.		X	X	X				X
1D(ii) Teachers validate each student's comments and questions, utilizing them to advance learning for all students.		X	X	X				X
1D (iii) Teachers encourage all students to overcome obstacles and remain persistent in the face of challenges, providing them with support in achieving their goals.		X	X	X				X
1(E) Teachers promote complex, higher-order thinking, leading class discussions and activities that provide opportunities for deeper learning.								
1E (i) Teachers set high expectations and create challenging learning experiences for students, encouraging them to apply disciplinary and cross-disciplinary knowledge to real-world problems.		X	X	X				X
1E (ii) Teachers provide opportunities for students to engage in individual and collaborative critical thinking and problem solving.		X	X	X				X
1E (iii) Teachers incorporate technology that allows students to interact with the curriculum in more significant and effective ways, helping them reach mastery.		X	X	X				X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
1(F) Teachers consistently check for understanding, give immediate feedback, and make lesson adjustments as necessary.								
1F(i) Teachers monitor and assess student progress to ensure that their lessons meet students' needs.		X	X	X	X			X
1F(ii) Teachers provide immediate feedback to students in order to reinforce their learning and ensure that they understand key concepts.		X	X	X				X
1F(iii) Teachers adjust content delivery in response to student progress through the use of developmentally appropriate strategies that maximize student engagement.		X	X	X				X
Standard 2--Knowledge of Students and Student Learning. Teachers work to ensure high levels of learning, social-emotional development, and achievement outcomes for all students, taking into consideration each student's educational and developmental backgrounds and focusing on each student's needs.								
2(A) Teachers demonstrate the belief that all students have the potential to achieve at high levels and support all students in their pursuit of social-emotional learning and academic success.								
2A(i) Teachers purposefully utilize learners' individual strengths as a basis for academic and social-emotional growth.	X					X		
2A(ii) Teachers create a community of learners in an inclusive environment that views differences in learning and background as educational assets.	X					X		
2A(iii) Teachers accept responsibility for the growth of all of their students, persisting in their efforts to ensure high levels of growth on the part of each learner.	X					X		

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
2(B) Teachers acquire, analyze, and use background information (familial, cultural, educational, linguistic, and developmental characteristics) to engage students in learning.								
2B(i) Teachers connect learning, content, and expectations to students' prior knowledge, life experiences, and interests in meaningful contexts.		X	X	X				X
2B(ii) Teachers understand the unique qualities of students with exceptional needs, including disabilities and giftedness, and know how to effectively address these needs through instructional strategies and resources.	X					X		
2B(iii) Teachers understand the role of language and culture in learning and know how to modify their practices to support language acquisition so that language is comprehensible and instruction is fully accessible.	X					X		

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
2(C) Teachers facilitate each student's learning by employing evidence-based practices and concepts related to learning and social-emotional development.								
2C(i) Teachers understand how learning occurs and how learners develop, construct meaning, and acquire knowledge and skills.	X					X		X
2C(ii) Teachers identify readiness for learning and understand how development in one area may affect students' performance in other areas.		X	X	X			X	X
2C(iii) Teachers apply evidence-based strategies to address individual student learning needs and differences, adjust their instruction, and support the learning needs of each student.		X	X	X			X	X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
Standard 3--Content Knowledge and Expertise. Teachers exhibit a comprehensive understanding of their content, discipline, and related pedagogy as demonstrated through the quality of the design and execution of lessons and their ability to match objectives and activities to relevant state standards.								
3(A) Teachers understand the major concepts, key themes, multiple perspectives, assumptions, processes of inquiry, structure, and real-world applications of their grade-level and subject-area content.								
3A(i) Teachers have expertise in how their content vertically and horizontally aligns with the grade-level/subject-area continuum, leading to an integrated curriculum across grade levels and content areas.		X	X	X				X
3A(ii) Teachers identify gaps in students' knowledge of subject matter and communicate with their leaders and colleagues to ensure that these gaps are adequately addressed across grade levels and subject areas.		X	X	X	X		X	X
3A(iii) Teachers keep current with developments, new content, new approaches, and changing methods of instructional delivery within their discipline.	X	X	X	X				X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
3(B) Teachers design and execute quality lessons that are consistent with the concepts of their specific discipline, are aligned to state standards, and demonstrate their content expertise.								
3B(i) Teachers organize curriculum to facilitate student understanding of the subject matter.		X	X	X				X
3B(ii) Teachers understand, actively anticipate, and adapt instruction to address common misunderstandings and preconceptions.		X	X	X		X		X
3B(iii) Teachers promote literacy and the academic language within the discipline and make discipline-specific language accessible to all learners.		X	X	X				X
3(C) Teachers demonstrate content-specific pedagogy that meets the needs of diverse learners, utilizing engaging instructional materials to connect prior content knowledge to new learning.								
3C(i) Teachers teach both the key content knowledge and the key skills of the discipline.		X	X	X		X		X
3C(ii) Teachers make appropriate and authentic connections across disciplines, subjects, and students' real-world experiences.		X	X	X				X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
Standard 4--Learning Environment. Teachers interact with students in respectful ways at all times, maintaining a physically and emotionally safe, supportive learning environment that is characterized by efficient and effective routines, clear expectations for student behavior, and organization that maximizes student learning.								
4(A) Teachers create a mutually respectful, collaborative, and safe community of learners by using knowledge of students' development and backgrounds.								
4A(i) Teachers embrace students' backgrounds and experiences as an asset in their learning environment.	X	X	X	X		X		X
4A(ii) Teachers maintain and facilitate respectful, supportive, positive, and productive interactions with and among students.	X	X	X	X		X		X
4A(iii) Teachers establish and sustain learning environments that are developmentally appropriate and respond to students' needs, strengths, and personal experiences.	X	X	X	X		X		X
4(B) Teachers organize their classrooms in a safe and accessible manner that maximizes learning.								
4B(i) Teachers arrange the physical environment to maximize student learning and to ensure that all students have access to resources.	X					X		
4B(ii) Teachers create a physical classroom set-up that is flexible and accommodates the different learning needs of students.	X					X		

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
4(C) Teachers establish, implement, and communicate consistent routines for effective classroom management, including clear expectations for student behavior.								
4C(i) Teachers implement behavior management systems to maintain an environment where all students can learn effectively.	X							
4C(ii) Teachers maintain a strong culture of individual and group accountability for class expectations.	X					X		
4C(iii) Teachers cultivate student ownership in developing classroom culture and norms.	X					X		

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
4(D) Teachers lead and maintain classrooms where students are actively engaged in learning as indicated by their level of motivation and on-task behavior.								
4D(i) Teachers maintain a culture that is based on high expectations for student performance and encourages students to be self-motivated, taking responsibility for their own learning.	X					X		
4D(ii) Teachers maximize instructional time, including managing transitions.	X	X	X	X				X
4D(iii) Teachers manage and facilitate groupings in order to maximize student collaboration, participation, and achievement.	X	X	X	X		X		X
4D(iv) Teachers communicate regularly, clearly, and appropriately with parents and families about student progress, providing detailed and constructive feedback and partnering with families in furthering their students' achievement goals.	X						X	

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
Standard 5--Data-Driven Practice. Teachers use formal and informal methods to assess student growth aligned to instructional goals and course objectives and regularly review and analyze multiple sources of data to measure student progress and adjust instructional strategies and content delivery as needed.								
5(A) Teachers implement both formal and informal methods of measuring student progress.								
5A(i) Teachers gauge student progress and ensure student mastery of content knowledge and skills by providing assessments aligned to instructional objectives and outcomes that are accurate measures of student learning.					X			X
5A(ii) Teachers vary methods of assessing learning to accommodate students' learning needs, linguistic differences, and/or varying levels of background knowledge.					X			X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
5(B) Teachers set individual and group learning goals for students by using preliminary data and communicate these goals with students and families to ensure mutual understanding of expectations.								
5B(i) Teachers develop learning plans and set academic as well as social-emotional learning goals for each student in response to previous outcomes from formal and informal assessments.		X	X	X			X	X
5B(ii) Teachers involve all students in self-assessment, goal setting, and monitoring progress.		X	X	X	X			X
5B(iii) Teachers communicate with students and families regularly about the importance of collecting data and monitoring progress of student outcomes, sharing timely and comprehensible feedback so they understand students' goals and progress.					X		X	X
5(C) Teachers regularly collect, review, and analyze data to monitor student progress.								
5C(i) Teachers analyze and review data in a timely, thorough, accurate, and appropriate manner, both individually and with colleagues, to monitor student learning.	X				X			X
5C(ii) Teachers combine results from different measures to develop a holistic picture of students' strengths and learning needs.		X	X	X	X			X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
5(D) Teachers utilize the data they collect and analyze to inform their instructional strategies and adjust short- and long-term plans accordingly.								
5D(i) Teachers design instruction, change strategies, and differentiate their teaching practices to improve student learning based on assessment outcomes.		X	X	X	X			X
5D(ii) Teachers regularly compare their curriculum scope and sequence with student data to ensure they are on track and make adjustments as needed.		X	X	X				X

Standard 6--Professional Practices and Responsibilities. Teachers consistently hold themselves to a high standard for individual development, pursue leadership opportunities, collaborate with other educational professionals, communicate regularly with stakeholders, maintain professional relationships, comply with all campus and school district policies, and conduct themselves ethically and with integrity.								
	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
6(A) Teachers reflect on their teaching practice to improve their instructional effectiveness and engage in continuous professional learning to gain knowledge and skills and refine professional judgment.								
6A(i) Teachers reflect on their own strengths and professional learning needs, using this information to develop action plans for improvement.	X	X	X	X				X
6A(ii) Teachers establish and strive to achieve professional goals to strengthen their instructional effectiveness and better meet students' needs.	X							X
6A(iii) Teachers engage in relevant, targeted professional learning opportunities that align with their professional growth goals and their students' academic and social-emotional needs.	X							X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
6(B) Teachers collaborate with their colleagues, are self-aware in their interpersonal interactions, and are open to constructive feedback from peers and administrators.								
6B(i) Teachers seek out feedback from supervisors, coaches, and peers and take advantage of opportunities for job-embedded professional development.	X							X
6B(ii) Teachers actively participate in professional learning communities organized to improve instructional practices and student learning.	X							X
6(C) Teachers seek out opportunities to lead students, other educators, and community members within and beyond their classrooms.								
6C(i) Teachers clearly communicate the mission, vision, and goals of the school to students, colleagues, parents and families, and other community members.	X					X		
6C(ii) Teachers seek to lead other adults on campus through professional learning communities, grade- or subject-level team leadership, committee membership, or other opportunities.	X							X

4/8 COURSES	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	ELE 584	RDG 519
6(D) Teachers model ethical and respectful behavior and demonstrate integrity in all situations.								
6D(i) Teachers adhere to the educators' code of ethics in §247.2 of this title (relating to Code of Ethics and Standard Practices for Texas Educators), including following policies and procedures at their specific school placement(s).	X							
6D(ii) Teachers communicate consistently, clearly, and respectfully with all members of the campus community, including students, parents and families, colleagues, administrators, and staff.	X					X		X
6D(iii) Teachers serve as advocates for their students, focusing attention on students' needs and concerns and maintaining thorough and accurate student records.	X					X		X

4/8 Standards, Domains, Competencies Alignment Chart
for Pedagogy and Professional Responsibilities EC-12 & Alignment to Chapter 149 Teacher Standards

Please indicate where in the curriculum your program addresses the relevant standards, domains, and competencies for the identified area.
TAC§228.30 (a)

INCLUDES IDENTIFICATION OF WHERE THE TEKS (CONTENT RELATED TO TEKS, ALIGNMENT AND GOALS/OBJECTIVES) AND THE COMMISSIONER STANDARDS (TEACHING STANDARDS, TS) ARE COVERED.

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Teacher Knowledge: What Teachers Know									
Students									
1.1k the intellectual, social, physical, and emotional developmental characteristics of students in different age groups; **InTASC 1b; 1d; 1e; 1j; 2d; 7i; 8j**	X	X	X	X		X			X
1.2k the implications of students' developmental characteristics for planning appropriate instruction**; TS2Cii Teachers identify readiness for learning and understand how development in one area may affect students' performance in other areas. InTASC 2e; 2o**	X	X	X	X		X			X
1.3k characteristics and instructional needs of students with varied backgrounds, skills, interests, and learning needs; **TS2Ci Teachers understand how learning occurs and how learners develop, construct meaning, and acquire knowledge and skills. InTASC 1h; 2f; 2g; 2m; 8a; 8p; 10j**	X	X	X	X		X			X
1.4k different approaches to learning that students may exhibit and what motivates students to become active, engaged learners; **InTASC 2f; 3i**	X	X	X	X					X
1.5k cultural and socioeconomic differences and the significance of these differences for instructional planning; **InTASC 2a; 2d; 2k; 2m; 8a; 8p**	X	X	X	X		X			X
1.6k appropriate strategies for instructing English language learners; **TS2Biii Teachers understand the role of language and culture in learning and know how to modify their practices to support language acquisition so that language is comprehensible and instruction is fully accessible. In TASC 2a; 2e; 2f; 2i; 2o; 4i; 4l**	X	X	X	X					X

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Content and Pedagogy									
1.7k the importance of the state content and performance standards as outlined in the Texas Essential Knowledge and Skills (TEKS); **TS3Ci Teachers teach both the key content knowledge and the key skills of the discipline. InTASC 4n; 5q; 7g**	X	X	X	X					X
1.8k relevant content of the discipline being taught, including concepts, principle relationships, methods of inquiry, and key issues; **InTASC 4b; 4c; 4n; 4p; 5h; 5i; 5j**		X	X	X					X
1.9k the significance of the vertical alignment of content, including prerequisite knowledge and skills; **TS3Ai Teachers have expertise in how their content vertically and horizontally aligns with the grade-level/subject-area continuum, leading to an integrated curriculum across grade levels and content. InTASC 7g**		X	X	X					X
1.10k how lesson content and skills connect with other disciplines and within the discipline; **InTASC 4i; 5h; 5i; 5j**		X	X	X					X
1.11k current research on best pedagogical practices. **TS3Aiii Teachers keep current with developments, new content, new approaches, and changing methods of instructional delivery within their discipline. InTASC 4o**		X	X	X				X	X
Selection of Instructional Goals and Objectives									
1.12k the importance of developing instructional goals and objectives that are clear, relevant, meaningful, and age-appropriate; **InTASC 6r; 7a; 7p**		X	X	X					X
1.13k the importance of developing instructional goals and objectives that can be assessed; **TS1Aii Teachers effectively communicate goals, expectations, and objectives to help all students reach high levels of achievement. InTASC 4r; 6r; 7p**		X	X	X					X
1.14k the importance of developing instructional goals and objectives that are suitable for students with varied learning needs; **TS 1D(iii) Teachers encourage all students to overcome obstacles and remain persistent in the face of challenges, providing them with support in achieving their goals. InTASC 2g; 2h; 2j; 4m; 7b; 7g; 7j; 7n; 7q; 8k; 8p; 10j**		X	X	X					X
1.15k the importance of aligning instructional goals with campus and district goals.		X	X	X					X
Resources									
1.16k the use of appropriate materials and resources for preparing instruction, presenting lessons, and assessing learning; **InTASC 4f; 5c; 5p; 7k; 7m; 8g; 8n; 8o; 8r; 10g**	X	X	X	X				X	X
1.17k the importance of knowing when to integrate technology into instruction and assessment; **InTASC 3g; 3h; 3m; 4g; 5l; 7k; 8n**	X				X				
1.18k the use of resources beyond the campus to help students meet academic and nonacademic needs. **InTASC 5p**						X			

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Designing Coherent Instruction									
1.19k the importance of designing instruction that reflects the TEKS; **InTASC 9a**	X	X	X	X					X
1.20k features of instruction that maximize students' thinking skills;	X	X	X	X		X			X
1.21k the importance of planning lessons and structuring units so that activities progress in a logical sequence; **InTASC 7c**	X	X	X	X					X
1.22k how materials, technology, and other resources may be used to support instructional goals and objectives and engage students in meaningful learning; **InTASC 3g; 3h; 3m; 5l; 8o; 8q; 8r; 10g**	X	X	X	X					X
1.23k the benefits of designing instruction that integrates content across disciplines; **TS3Cii Teachers make appropriate and authentic connections across disciplines, subjects, and students' real-work experiences. InTASC 5a; 5h; 5q; 5r; 7h**	X								
1.24k the importance of engaging in continuous monitoring and self-assessment of instructional effectiveness. **InTASC 3b**	X	X	X	X	X	X			X
Assessment of Student Learning									
1.25k the role of assessment in guiding instructional planning**; InTASC 1a; 6a; 6e; 6f; 6g; 6j; 6k; 7d; 7m; 9i**		X	X	X	X				X
1.26k the importance of creating assessments that are congruent with instructional goals and objectives; **TS5Ai Teachers gauge student progress and ensure student mastery of content knowledge and skills by providing assessments aligned to instructional objectives and outcomes that are accurate measures of student learning. InTASC 6b; 6r; 7f**		X	X	X	X				X
1.27k the characteristics, uses, advantages, and limitations of various assessment methods and strategies; **TS5Aii Teachers vary methods of assessing learning to accommodate students' learning needs, linguistic differences, and/or varying levels of background knowledge. InTASC 3e; 6e; 6f; 6g; 6h**					X				
1.28k the role of technology in assessing student learning; **InTASC 5l; 8r**	X				X				
1.29k the benefits of and strategies for promoting student self-assessment;					X				

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
1.30k the connection between the Texas statewide assessment program, the TEKS, and instruction; **TS5Dii Teachers regularly compare their curriculum score and sequence with student data to ensure they are on track and make adjustments as needed.**	X	X	X	X	X				X
1.31k how to analyze data from local, state, and other assessments using common statistical measures. **InTASC 6c; 6l; 6m**					X			X	
Application: What Teachers Can Do									
Students									
1.1s plan lessons that reflect an understanding of students' developmental characteristics and needs; **TS1Bi Teachers plan instruction that is developmentally appropriate, is standards driven, and motivates student to learn. InTASC 1e; 1h; 2a**	X	X	X	X					X
1.2s adapt lessons to address students' varied backgrounds, skills, interests, and learning needs, including the needs of English language learners; **TS2Bii Teachers understand the unique qualities of students with exceptional needs, including disabilities and giftedness, and know how to effectively address these through instructional strategies and resources;** **TS2Ciii Teachers apply evidenced-based strategies to address individual student learning needs and differences, adjust their instruction, and support the learning needs of each student. InTASC 2a; 2b; 2d; 2f; 2g; 2h; 2j; 4i; 6u; 7j; 7n; 7q; 8l**	X	X	X	X					X
1.3s use effective approaches to address varied student learning needs and preferences; **TS1Ci Teachers differentiate instruction, aligning methods and techniques to diverse student needs, including acceleration, remediation, and implementation of individual education plans. InTASC 2q; 4m**	X	X	X	X		X			X
1.4s plan instruction that motivates students to want to learn and achieve; and		X	X	X		X			
1.5s acknowledge and respect cultural and socioeconomic differences among students when planning instruction. **InTASC 2a; 4m; 5g**	X	X		X		X			
Content and Pedagogy									
1.6s use the Texas Essential Knowledge and Skills (TEKS) to plan instruction; **TS3Bi Teachers organize curriculum to facilitate student understanding of the subject matter.**	X	X	X	X					X
1.7s exhibit appropriate knowledge of a subject to promote student learning; **TS1Ai Teachers develop lessons that build coherently toward objectives based on course content, curriculum scope and sequence, and expected student outcomes. InTASC 4h**		X	X	X					X

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	MLG 580	ELE 584	RDG 519
1.8s demonstrate awareness of common student misconceptions or likely sources of student error in relation to particular content; **TS3Bii Teachers understand, actively anticipate, and adapt instruction to address common misunderstandings and preconceptions. InTASC 4e; 4k; 1i**		X	X	X				X	X
1.9s plan instruction that reflects an understanding of important prerequisites relationships; **TS1AiiiTeachers connect students' prior understanding and real-word experiences to new content and contexts, maximizing learning opportunities. InTASC 1f; 2c; 4d**		X	X	X					X
1.10s plan instruction that makes connections within the discipline and across other disciplines; **TS1Ei Teachers set high expectations and create challenging learning experiences for students, encouraging them to apply disciplinary and cross-disciplinary and cross-disciplinary knowledge to real-world problems. InTASC 4d; 5b**		X	X	X					X
1.11s use a variety of pedagogical techniques to convey information and teach Skills **TS3Biii Teachers promote literacy and the academic language within the discipline and make discipline-specific language accessible to all learners. InTASC 4a**		X	X	X					X
Selection of Instructional Goals and Objectives									
1.12s develop instructional goals and objectives that are clear, relevant, meaningful, and age-appropriate;	X	X	X	X					X
1.13s develop instructional goals and objectives that are able to be assessed;	X	X	X	X	X				X
1.14s develop instructional goals and objectives that reflect students' age, develop-mental level, prior skills and knowledge, background, and interests; **TS2Bi Teachers connect learning, content, and expectations to students' prior knowledge, life experiences, and interests in meaningful contexts. InTASC 4d**		X	X	X		X			X
1.15s develop instructional goals and objectives that reflect different types of student learning and skills.		X	X	X		X			X
1.16s use various types of materials and other resources to aid in preparing and implementing instruction; **TS1Ciii Teachers integrate the use of oral, written, graphic, kinesthetic, and/or tactile methods to teach key concepts. InTASC 2f; 4f; 4g; 4i; 5c; 5p; 7k; 7m; 8n**		X	X	X					X
1.17s use technological tools to promote learning and expand instructional options; and	X			X					
1.18s use resources available outside the school (e.g., museums, businesses, community members) to enhance students' learning opportunities				X					

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Designing Coherent Instruction									
1.19s plan instructional activities that progress sequentially and support stated instructional goals based on the TEKS; **TS1Bii Teachers use a range of instructional strategies, appropriate to the content area, to make subject matter accessible to all students. InTASC 4a**		X	X	X					X
1.20s select instructional resources that support instructional goals, enhance student achievement, and engage students in learning; **TS1Biii Teachers use and adapt resources, technologies, and standards-aligned instructional materials to promote student success in meeting learning goals.**		X	X	X					X
1.21s use varied activities and instructional groupings to engage students in instructional content and meet instructional goals and objectives; **TS1Cii Teachers plan student groupings, including pairings and individualized and small-group instruction, to facilitate student learning.**		X	X	X					X
1.22s allocate time appropriately within lessons and units, including providing adequate opportunities for students to engage in reflection and closure; and	X	X	X	X					X
1.23s provide students with opportunities to explore content from many perspectives. **InTASC 5i; 5j; 5q**				X					X
Assessment of Student Learning									
1.24s use a variety of assessment methods, including technology, that are appropriate for evaluating student achievement of instructional goals and objectives; **InTASC 6o; 6p; 6t**		X	X	X	X				X
1.25s communicate assessment criteria and standards to students;		X	X	X	X			X	X
1.26s design assessments, where appropriate, that reflect real-world applications of knowledge and understanding;		X	X	X	X				X
1.27s promote students' use of self-monitoring and self-assessment; **TS5Bii Teachers involve all students in self-assessment, goal setting, and monitoring progress. InTASC 3b; 6q**		X	X	X	X				X

Standard I: The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment. (Domain I. Competencies 001-004 Domain III. Competencies 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
1.28s analyze assessment results to aid in determining students' strengths and needs; **TS2Ai Teachers purposefully utilize learners' individual strengths as a basis for academic and social-emotional growth.** **TS5Ci Teachers analyze and review data in a timely, thorough, accurate, and appropriate manner, both individually and with colleagues, to monitor student learning.** **TS5Cii Teachers combine results from different measures to develop a holistic picture of students' strengths and learning needs.** **InTASC 7l; 8b**		X	X	X		X		X	X
1.29s use assessment results to help plan instruction for groups of students or individuals; **TS1Fiii Teachers adjust content delivery in response to student progress through the use of developmentally appropriate strategies that maximize student engagement.** **TS5Bi Teachers develop learning plans and set academic as well as social-emotional learning goals for each student in response to previous outcomes from formal and informal assessments.** **TS5Di Teachers design instruction, change strategies, and differentiate their teaching practices to improve student learning based on assessment outcomes.** **InTASC 6e; 7l; 8b**		X	X	X				X	X

Standard II: The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence. (Domain II. Competencies 005-006)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Teacher Knowledge: What Teachers Know									
Creating an Environment of Respect and Rapport									
2.1k the importance of creating a learning environment in which diversity and individual differences are respected; **TS4Ai Teachers create a mutually respectful, collaborative, and safe community of learners by using knowledge of students' development and backgrounds. InTASC 2n; 5s**	X					X	X		
2.2k the impact of teacher-student interactions and interactions among students on classroom climate and student learning and development; **TS4Aiii Teachers establish and sustain learning environments that are developmentally appropriate and respond to students' needs, strengths, and personal experiences. InTASC 3c; 3j; 8h**	X					X	X		
2.3k ways to establish a positive classroom climate that fosters active engagement in learning among students; **InTASC 3b; 5s**	X					X	X		
Establishing an Environment for Learning and Excellence									
2.4k the importance of communicating enthusiasm for learning; and	X					X	X		
2.5k the necessity of communicating teacher expectations for student learning. **InTASC 2l**	X					X	X		
Managing Classroom Procedures									
2.6k how classroom routines and procedures affect student learning and achievement; **InTASC 3d; 3k; 5c; 10o**	X					X	X		
2.7k how to organize student groups to facilitate cooperation and productivity; **InTASC 3d; 3k; 3o; 10o**	X								
2.8k the importance of time management for effective classroom functioning; **InTASC 3d; 10o**	X						X		
2.9k procedures for managing transitions; **InTASC 3d; 3k; 10o**	X						X		
2.10k routines and procedures for managing and using materials, supplies, and technology; **InTASC 3d; 3k; 10o**	X						X		
2.11k non-instructional duties (e.g., taking attendance) and procedures for performing these duties effectively; and	X								
2.12k the classroom roles of paraprofessionals, volunteers, and other professionals, including substitute teachers, in accordance with district policies and procedures.	X					X			

Standard II: The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence. (Domain II. Competencies 005-006)	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	MLG 540	MLG 580	ELE 584	RDG 519
Managing Student Behavior									
2.13k theories and techniques relating to managing and monitoring student behavior; **InTASC 3d; 10o**	X						X		
2.14k appropriate behavior standards and expectations for students at various developmental levels; **TS4Ci Teachers implement behavior management systems to maintain an environment where all students can learn effectively. InTASC 3d; 10o**	X					X	X		
2.15k the significance of district policies and procedures for managing student behavior and ensuring ethical behavior in the classroom;	X						X		
2.16k the importance of establishing classroom standards of student conduct and clear consequences for inappropriate behavior; **TS 4B(iii) Teachers cultivate student ownership in developing classroom culture and norms. InTASC 3d; 3k; 10o**	X						X		
2.17k the value of encouraging students to work in an ethical manner and monitor their own behavior; **InTASC 3o**	X						X		
2.18k appropriate responses to a variety of student behaviors and misbehaviors. **InTASC 3d; 3k; 8s**	X						X		
Maintaining a Physical and Emotional Environment that is Safe and Productive									
2.19k features and characteristics of physical spaces that are safe and productive for learning; **TS 4B(i) Teachers arrange the physical environment to maximize student learning and to ensure that all students have access to resources. InTASC 3d**	X						X		
2.20k the benefits and limitations of various arrangements of furniture in the classroom; **InTASC 3d**	X						X		
2.21k procedures for ensuring safety in the classroom; **InTASC 3d**	X						X		
2.22k physical accessibility as a potential issue in student learning; and **TS 4B(ii) Teachers create a physical classroom set-up that is flexible and accommodates the different learning needs of students. InTASC 3d**	X						X		
2.23k students' emotional needs and ways to address needs.	X					X	X		

Standard II: The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence. (Domain II. Competencies 005-006)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Application: What Teachers Can Do									
Creating an Environment of Respect and Rapport									
2.1s interact with students in ways that reflect support and show respect for all students; **TS4Aii Teachers maintain and facilitate respectful, supportive, positive, and productive interactions with and among students. InTASC 3k**	X					X	X		
2.2s use strategies to ensure that interactions among students are polite, respectful, and cooperative; **InTASC 3k**	X						X		
2.3s use strategies to ensure that the classroom environment and interactions among individuals and groups within the classroom promote active engagement in learning; **TS1Di Teachers ensure that the learning environment features a high degree of student engagement by facilitating discussion and student-centered activities as well as leading direct instruction. InTASC 3k**	X						X		
Establishing an Environment for Learning and Excellence									
2.4s communicate to all students the importance of instructional content and the expectation of high-quality work; **InTASC 3c; 5o**	X	X	X	X	X				X
2.5s ensure that instructional goals and objectives, activities, classroom interactions, assessments, and other elements of the classroom environment convey high expectations for student achievement; **TS2Aiii Teachers accept responsibility for the growth of all of their students, persisting in their efforts to ensure high levels of growth on the part of each learner.**	X	X	X	X	X				X
Managing Classroom Procedures									
2.6s establish classroom rules and procedures to promote an organized and productive learning environment; **TS4Ciii Teachers cultivate student ownership in developing classroom culture and norms. InTASC 3d; 10o**	X						X		
2.7s organize and manage groups to ensure that students work together cooperatively and productively; **TS4Diii Teachers manage and facilitate groupings in order to maximize student collaboration, participation, and achievement. InTASC 3k**	X					X	X		

Standard II: The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence. (Domain II. Competencies 005-006)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
2.8s schedule activities and manage class time in ways that maximize student learning; **TS4Dii Teachers maximize instructional time, including managing transitions. InTASC 3d**	X						X		
2.9s manage transitions to maximize instructional time; **InTASC 3d**	X						X		
2.10s implement routines and procedures for the effective management of materials, supplies, and technology; **InTASC 3d**	X						X		
2.11s coordinate the performance of non-instructional duties with instructional activities;	X								
2.12s monitor the performance of volunteers and paraprofessionals in the classroom in accordance with district policies and procedures; and	X								
2.13s use volunteers and paraprofessionals to enhance and enrich instruction, and evaluate their effectiveness.	X								
Managing Student Behavior									
2.14s communicate high and realistic expectations for students' behavior and ensure that students understand behavior expectations and consequences for misbehavior; **TS4Cii Teachers maintain a strong culture of individual and group accountability for class expectations. InTASC 10o**	X						X		
2.15s consistently enforce standards and expectations for student behavior and ethical work habits; **TS4Di Teachers maintain a culture that is based on high expectations for student performance and encourages students to be self-motivated, taking responsibility for their own learning. InTASC 3d; 3k**	X						X		
2.16s encourage students to maintain ethical work standards and monitor their own behavior; **InTASC 3d; 3k**	X						X		
2.17s use effective methods and procedures for monitoring and responding to positive and negative student behaviors. **InTASC 3d; 3k**	X						X		
Maintaining a Physical and Emotional Environment that is Safe and Productive									
2.18s organize the physical environment to facilitate learning; **TS4Bii Teachers create a physical classroom set-up that is flexible and accommodates the different learning needs of students. TS4Bi Teachers arrange the physical environment to maximize student learning and to ensure that all students have access to resources. InTASC 3d**	X						X		

Standard II: The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence. (Domain II. Competencies 005-006)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
2.19s create a safe and inclusive classroom environment; **InTASC 3k**	X					X	X		
2.20s use effective strategies for creating and maintaining a positive classroom environment; **TS2Aii Teachers create a community of learners in an inclusive environment that views differences in learning and background as educational assets. InTASC 3d**	X						X		X
2.21s respect students' rights and dignity. **InTASC 3k**	X					X	X		

Standard III: The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback. (Domain III. Competency 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Teacher Knowledge: What Teachers Know									
Communication									
3.1k the importance of clear, accurate communication in the teaching and learning process; **InTASC 3l; 5e; 5n**	X	X	X	X		X	X		X
3.2k principles and strategies for communicating effectively in varied teaching and learning contexts; **InTASC 3f; 5n; 8m; 8q**	X	X	X	X					X
3.3k spoken and written language that is appropriate to students' age, interests, and background;	X	X	X	X					X
3.4k skills and strategies for engaging in skilled questioning and leading effective student discussions; **InTASC 3q; 3r; 8i**		X	X	X					X
Engaging Students in Learning									
3.5k criteria for selecting appropriate instructional activities and assignments for students with varied characteristics and needs;	X								X
3.6k how to present content to students in relevant and meaningful ways		X	X	X					X
3.7k the use of instructional materials, resources, and technologies that are appropriate and engaging for students in varied learning situations;		X	X	X					X
3.8k the importance of promoting students' intellectual involvement with content and their active development of understanding; **InTASC 5d; 5m**		X	X	X					X
3.9k strategies and techniques for using instructional groupings to promote student learning;	X	X	X	X					X
3.10k different types of motivation, factors affecting student motivation, and effective motivational strategies in varied learning contexts; and	X						X		X
3.11k techniques for structuring and pacing lessons in ways that promote student engagement and learning.		X	X	X					X

Standard III: The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback. (Domain III. Competency 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Providing Feedback to Students									
3.12k characteristics of effective feedback for students; **InTASC 6n**	X						X		X
3.13k the role of timely feedback in the learning process; and	X						X		X
3.14k how to use constructive feedback to guide each student's learning; **InTASC 6d; 6s**		X		X			X		X
Demonstrating Flexibility and Responsiveness									
3.15k the significance of teacher flexibility and responsiveness in the teaching/ learning process;	X							X	
3.16k situations in which teacher flexibility can enhance student learning.	X							X	
Application: What Teachers Can Do									
Communication									
3.1s communicate directions, explanations, and procedures clearly, accurately, and with an appropriate level of detail, both orally and in writing;		X	X	X					X
3.2s use effective interpersonal skills (including both verbal and nonverbal skills) to reach students and communicate the teacher's commitment to students;		X	X	X					X
3.3s use spoken and written language that is appropriate to students' ages, interests, and backgrounds;		X	X	X		X			X
3.4s use effective communication techniques, including questioning and discussion techniques, to foster active student inquiry, higher-order thinking, problem solving, and productive, supportive interactions; **TS1Dii Teachers validate each student's comments and questions, utilizing them to advance learning for all students;** **TS1Eii Teachers provide opportunities for students to engage in individual and collaborative critical thinking and problem solving.** **InTASC 3p; 5d; 5f; 5m; 5o**		X	X	X					X
3.5s use carefully framed questions to enable students to reflect on their understanding of content and to consider new possibilities; **InTASC 5o**		X	X	X					

Standard III: The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback. (Domain III. Competency 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
3.6s apply skills for leading discussions that engage all students in exploring important questions and that extend students' knowledge; **TS1Dii Teachers validate each student's comments and questions, utilizing them to advance learning for all students.**		X	X	X					
Engaging Students in Learning									
3.7s create lessons with a clearly defined structure around which activities are organized;		X	X	X					
3.8s create activities and assignments that are appropriate for students and that actively engage them in the learning process		X	X	X					X
3.9s select and use instructional materials, resources, and technologies that are suitable for instructional goals and that engage students cognitively; **TS1Eiii Teachers incorporate technology that allows students to interact with the curriculum in more significant and effective ways, helping them reach mastery.**		X	X	X		X			X
3.10s represent content effectively and in ways that link with students' prior knowledge and experience;		X	X	X					
3.11s use flexible grouping to promote productive student interactions and enhance learning;		X	X	X					
3.12s pace lessons appropriately and flexibly in response to student needs;		X	X	X					
3.13s engage students intellectually by teaching meaningful content in ways that promote all students' active and invested participation in the learning process; and		X	X	X					
3.14s encourage students' self-motivation and active engagement in learning; **TS1Diii Teachers encourage all students to overcome obstacles and remain persistent in the face of challenges, providing them with support in achieving their goals.**		X	X	X			X		
Providing Feedback to Students									
3.15s use appropriate language and formats to provide each student with timely feedback that is accurate, constructive, substantive, and specific; **TS1Fii Teachers provide immediate feedback to students in order to reinforce their learning and ensure that they understand key concepts.**		X	X	X			X		X
3.16s promote students' ability to use feedback to guide and enhance their learning; and		X	X	X			X		X

Standard III: The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback. (Domain III. Competency 007-010)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
3.17s base feedback on high expectations for student learning.		X	X	X				X	X
Demonstrating Flexibility and Responsiveness									
3.18s respond flexibly to various situations, such as lack of student engagement in a learning activity or the occurrence of an unanticipated learning opportunity;		X	X	X				X	
3.19s adjust instruction based on ongoing assessment of student understanding; **TS1Fi Teachers monitor and assess student progress to ensure that their lessons meet students' needs.**		X	X	X				X	X
3.20s use alternative instructional approaches to ensure that all students learn and succeed.		X	X	X					X

Standard IV: The teacher fulfills professional roles and responsibilities and adheres to legal and ethical requirements of the profession (Domain IV. Competencies 011-013)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
Teacher Knowledge: What Teachers Know									
Interacting and Communicating with Families									
4.1k the importance of families' involvement in their children's education; and	X					X			X
4.2k appropriate ways for working and communicating effectively with families in varied contexts. **InTASC 10g**	X					X			X
Interacting with Other Educators and Contributing to the School and District									
4.3k types of interactions among professionals in a school (e.g., vertical teaming, horizontal teaming, team teaching, mentoring) and the significance of these interactions						X			
4.4k appropriate ways for working and communicating effectively with other professionals in varied educational contexts;						X			X
4.5k the roles and responsibilities of specialists and other professionals at the building and district levels (e.g., department chairperson, principal, board of trustees, curriculum coordinator, special education professional);						X			X
4.6k available educator support systems (e.g., mentors, service centers, state initiatives, universities);						X			
4.7k the various ways in which teachers may contribute to their school and district; and						X			X
4.8k the value of participating in school activities.	X					X			
Continuing Professional Development									
4.9k the importance of participating in professional development activities to enhance content knowledge and pedagogical skill;		X							X
4.10k the importance of documenting self-assessments;					X				X

Standard IV: The teacher fulfills professional roles and responsibilities and adheres to legal and ethical requirements of the profession (Domain IV. Competencies 011-013)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
4.11k characteristics, goals, and procedures associated with teacher appraisal; **InTASC 9k**	X								
4.12k the importance of using reflection and ongoing self-assessment to enhance teaching effectiveness; **TS6Ai Teachers reflect on their own strengths and professional learning needs, using this information to develop action plans for improvement. InTASC 4q; 9e; 9g; 9l; 9m**		X	X	X	X			X	X
Legal and Ethical Requirements and the Structure of Education in Texas									
4.13k legal requirements for educators (e.g., those related to special education, students' and families' rights, student discipline, equity, child abuse); **InTASC 9j; 9o**	X								
4.14k ethical guidelines for educators in Texas (e.g., in relation to confidentiality, interactions with students and others in the school community); **InTASC 5c; 5k**	X								
4.15k policies and procedures in compliance with Code of Ethics and Standards Practices for Texas Educators as adopted by the State Board for Educator Certification; **InTASC 9o**	X								
4.16k procedures and requirements for maintaining accurate student records;	X								
4.17k the importance of adhering to required procedures for administering state-and district-mandated assessments; **InTASC 6v**	X								
4.18k the structure of the education system in Texas, including relationships between campus, local, and state components; **InTASC 10l**	X								
Application: What Teachers Can Do									
Interacting and Communicating with Families									
4.1s interact appropriately with families that have diverse characteristics, backgrounds, and needs; **InTASC 1c; 3n**	X					X			
4.2s apply procedures for conducting effective parent-teacher conferences;	X					X			
4.3s communicate with families on a regular basis to share information about students' progress and respond appropriately to families' concerns; **TS4Div Teachers communicate regularly, clearly, and appropriately with parents and families about student progress, providing detailed and constructive feedback and partnering with families in furthering their students' achievement goals; InTASC 1c; 10d; 10q**	X								X

Standard IV: The teacher fulfills professional roles and responsibilities and adheres to legal and ethical requirements of the profession (Domain IV. Competencies 011-013)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
4.4s engage families in their children's education and in various aspects of the instructional program; **TS5Biii Teachers communicate with students and families regularly about the importance of collecting data and monitoring progress of student outcomes, sharing timely and comprehensible feedback so they understand students' goals and progress.** **TS6Ci Teachers clearly communicate the mission, vision, and goals of the school to students, colleagues, parents and families, and other community members; InTASC 1e; 3a; 3n; 10m**	X								X
Interacting with Other Educators and Contributing to the School and District									
4.5s maintain supportive and cooperative relationships with colleagues; **TS6Dii Teachers communicate consistently, clearly, and respectfully with all members of the campus community, including students, parents and families, colleagues, administrators, and staff; InTASC 1c; 3n; 7e; 8c**	X								X
4.6s engage in collaborative decision making and problem solving with other educators to support students' learning and well-being; **TS6Bii Teachers actively participate in professional learning communities organized to improve instructional practices and student learning; InTASC 1c; 3n; 7e; 8c**	X					X			
4.7s work productively with supervisors and mentors to address issues and enhance professional skills and knowledge; **TS6Bi Teachers seek out feedback from supervisors, coaches, and peers and take advantage of opportunities for job-embedded professional development; InTASC 10n**	X					X			
4.8s communicate effectively and appropriately with other educators in varied contexts; **InTASC 9d; 9d; 10n**	X					X			X
4.9s collaborate professionally with other members of the school community to achieve school and district educational goals; **TS3Aii Teachers identify gaps in students' knowledge of subject matter and communicate with their leaders and colleagues to ensure that these gaps are adequately addressed across grade levels and subject areas; InTASC 7e; 8c**	X					X			
4.10s participate in decision making, problem solving, and sharing ideas and expertise; **InTASC 8c**	X					X			

Standard IV: The teacher fulfills professional roles and responsibilities and adheres to legal and ethical requirements of the profession (Domain IV. Competencies 011-013)	**ELE 520**	**ELE 521**	**ELE 522**	**ELE 523**	**ELE 525**	**MLG 540**	**MLG 580**	**ELE 584**	**RDG 519**
4.11s assume professional responsibilities and duties outside the classroom, as appropriate (e.g., serve on committees, volunteer to participate in events and projects); **TS6Cii Teachers seek to lead other adults on campus through professional learning communities, grade- or subject-level team leadership, committee membership, or other opportunities.**	X								X
Continuing Professional Development									
4.12s participate in various types of professional development opportunities (e.g., conferences, workshops, work with mentors and other support systems); **TS6Aiii Teachers engage in relevant, targeted professional learning opportunities that align with their professional growth goals and their students' academic and social-emotional needs; InTASC 9b; 9n; 10r**	X								X
4.13s enhance content and pedagogical knowledge through a variety of activities (e.g., reading journals, joining professional associations, attending conferences, engaging in coursework); **InTASC 9n**	X								X
4.14s use evidence of self-assessment (e.g., portfolio) to identify strengths, challenges, and potential problems; improve teaching performance; and achieve instructional goals; **TS6Aii Teachers establish and strive to achieve professional goals to strengthen their instructional effectiveness and better meet students' needs; InTASC 9l; 9m; 10t**	X								X
4.15s use appropriate resources and support systems inside and outside the school to address professional development needs; **InTASC 9n**	X								X
Legal and Ethical Requirements and the Structure of Education in Texas									
4.16s use knowledge of legal and ethical guidelines to guide behavior in education-related situations; **TS6Di Teachers adhere to the educators' code of ethics in Chapter 247.2 of this title (relating to Code of Ethics and Standard Practices for Texas Educators), including following policies and procedures at their specific school placement(s); InTASC 9o**	X					X			
4.17s serve as an advocate for students and the profession; **TS6Diii Teachers serve as advocates for their students, focusing attention on students' needs and concerns and maintaining thorough and accurate student records; InTASC 9f; 10s**	X								X
4.18s maintain accurate records; **TS6Diii Teachers serve as advocates for their students, focusing attention on students' needs and concerns and maintaining thorough and accurate student records.**	X								X
4.19s use knowledge of the structure of state and local education systems to seek information and assistance in addressing issues	X								X
Other State Requirements									
Code of Ethics	X								
First 15 Days of School Observation	X								
Suicide Prevention	X								

4-8 PROGRAM - Technology Applications for Beginning Teachers
Standards Alignment Chart

Please indicate where in the curriculum your program addresses the relevant Technology Applications standards, domains, and competencies. ***TAC§228.30***
K = The beginning teacher **knows and understands**
S= The beginning teacher is able to **teach** students to

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard I. **All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Application Texas Essential Knowledge and Skills (TEKS) into the curriculum.**						
1.1k how to use innovative technology and electronic communication to create new knowledge; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. 7a ANALYST Provide alternative ways for students to demonstrate competency and reflect on their learning using technology. 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.		X				
1.2 k how to use prior knowledge to develop new ideas, products, and processes; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6a FACILITATOR Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings. 6b FACILITATOR Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. 7a ANALYST Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.		X				

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard I. **All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Application Texas Essential Knowledge and Skills (TEKS) into the curriculum.**						
1.3 k how to demonstrate creative thinking, construct new knowledge, and develop innovative products and processes that use technology; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.				X		
11.1s design and create interdisciplinary multimedia presentations that include audio, video, text, and graphics; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections..				X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
1.2s explore complex systems or issues by using models, simulations, and new technologies to develop hypotheses, modify input, and analyze results; **ISTE** 6b FACILITATOR Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.			X			
1.3s analyze trends and forecast possibilities and develop steps for the creation of an innovative process or product; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.					X	
1.4s apply prior knowledge to develop new ideas, products, and processes; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. 7a ANALYST Provide alternative ways for students to demonstrate competency and reflect on their learning using technology. 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.		X				
1.5s create, present, publish, and copyright original works as a means of personal or group expression. **ISTE** 4a COLLABORATOR Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.				X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard II. All teachers collaborate and communicate both locally and globally using digital tools and resources to reinforce an promote learning.						
2.1k how to design and format digital information for appropriate and effective communication; **ISTE** 2a LEADER Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. 4d COLLABORATOR Demonstrate cultural competency when communicating with students, parents, and colleagues and interact with them as co-collaborators in student learning. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections. 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.	X					
2.2k how to deliver a product electronically in a variety of media; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
2.3k how to evaluate communication in terms of both process and product; **ISTE** 4d COLLABORATOR Demonstrate cultural competency when communicating with students, parents, and colleagues and interact with them as co-collaborators in student learning.	X					
2.4k how to use a variety of digital tools to create and manage personal and professional learning networks for collaboration, communication, and instruction. **ISTE** 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
2.1s use technical writing strategies to create products such as a technical instruction guide; **ISTE** 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.				X		
2.2s participate in electronic communities as a learner, initiator, and contributor; **ISTE** 1b LEARNER Pursue professional interest by creating and actively participating in local and global learning networks. 2a LEADER Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. 4a COLLABORATOR Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.				X		
2.3s employ technological collaboration such as sharing information through online communications to complete tasks; **ISTE** 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.		X				
2.4s use groupware, collaborative software, and productivity tools to create products; **ISTE** 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.				X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
2.5s use technology in self-directed activities to create products for and share products with defined audiences; **ISTE** 4a COLLABORATOR Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology. 4b COLLABORATOR Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues. 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally. 4d COLLABORATOR Demonstrate cultural competency when communicating with students, parents, and colleagues and interact with them as co-collaborators in student learning. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.		X		X		
2.6s evaluate student-created products through self- and peer review for relevance to the assignment or task prior to final submission; **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.				X		
2.7s use productivity tools, such as slide shows, posters, multimedia presentations, newsletters, banners, brochures, or reports, to create effective document files for defined audiences; **ISTE** 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.		X		X		
2.8s use a variety of media, formats, devices, and virtual environments to select, store, and deliver products; **ISTE** 6b FACILITATOR Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.				X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
2.9s design and create interdisciplinary multimedia presentations that include audio, video, text, and graphics for defined audiences; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.		X		X		
2.10s create and manage personal learning networks to collaborate and publish with peers, experts, or others by using digital tools such as blogs, wikis, audio/video communication, or other emerging technologies. **ISTE** 1b LEARNER Pursue professional interest by creating and actively participating in local and global learning networks. 2a LEADER Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.				X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard III. **All teachers acquire, analyze, and manage content from digital resources.**						
3.1k how to use strategies for acquiring information from electronic resources in a variety of formats; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.	X					
3.2k how to evaluate and validate acquired electronic information; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.	X					
3.3k how to access and use online help. **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.	X				X	
3.1s use strategies to locate and acquire desired information from collaborative software and online resources; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
3.2s apply appropriate electronic search strategies in the acquisition of information to guide inquiry, including keyword and Boolean search strategies; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.						X
3.3s use online help and other documentation; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.						X
3.4s determine and employ methods to evaluate electronic information for accuracy and validity; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.	X					
3.5s resolve information conflicts and validate information by accessing, researching, and comparing data from multiple sources; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.						X
3.6s identify the source, location, media type, relevancy, and content validity of available information; **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.						X
3.7s process data and communicate results. **ISTE** 3b CITIZEN Establish a learning culture that promotes curiosity, and critical examination of online resources and fosters digital literacy and media fluency.						X

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard IV. **All teachers make informed decisions by applying critical-thinking and problem-solving skills.**						
4.1k how to use appropriate computer-based productivity tools to create and modify solutions to problems; **ISTE** 6b FACILITATOR Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.	X					
4.2k how to use technology applications to facilitate evaluation of work, including both process and product; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.						X
4.3k how to evaluate and modify steps to accomplish a task or the development of a process or product. **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.						X

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
4.1s discuss, explain, and evaluate the impact of technology applications on society and in various areas of study through research, interviews, and personal observation; **ISTE** 1c LEARNER Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.	X					
4.2s plan and manage activities to develop a solution, design a computer program, or complete a project; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.				X		
4.3s collect and analyze data to identify solutions, make informed decisions, and support reasoning; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.					X	X
4.4s use multiple processes and diverse perspectives to explore alternative solutions; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.	X					
4.5s evaluate and modify steps to make informed decisions and support reasoning to accomplish a task or the development of a process or product; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.		X				

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
4.6s identify and define relevant problems and significant questions for investigation; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.			X			
4.7s transfer current knowledge to the learning of newly encountered technologies; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.				X		
4.8s evaluate the appropriateness of a digital tool to achieve the desired product; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.		X				
4.9s use tools such as word processing, spreadsheets, databases, graphic organizers, charts, multimedia, simulations, models, and programming languages to collect, analyze, and represent data; **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction. 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.					X	X

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
4.10s design and implement procedures to track trends, set timelines, and review/evaluate progress for continual improvement in process and product; **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction. 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.						X
4.11s design and implement procedures for tracking trends, setting timelines, and reviewing and evaluating products through the use of technology tools such as database managers, daily/monthly planners, and project management tools; **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction. 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.						X
4.12s determine and employ technology specifications to evaluate projects for design, content delivery, purpose, and audience and demonstrate that established criteria or rubrics can be used to evaluate the process and product. **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction. 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.						X

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard V. **All teachers practice and promote safe, responsible, legal, and ethical behavior while using technology tools and resources.**						
5.1k laws and issues regarding the use of technology in society; **ISTE** 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
5.2k how to practice and explain ethical acquisition of information and standard methods for citing sources; **ISTE** 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
5.3k how to practice and explain safe and appropriate online behavior, personal security guidelines, digital etiquette, and acceptable use of technology. **ISTE** 3a CITIZEN Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationship and community. 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property. 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					
5.1s understand copyright laws, fair use guidelines, digital safety rules, creative commons, free and open source, public domain, violations, and issues including but not limited to computer hacking, computer piracy, intentional virus setting, and invasion of privacy; **ISTE** 3a CITIZEN Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationship and community. 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
5.2s model ethical acquisition and use of digital information, including using established methods to cite sources; **ISTE** 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
5.3s demonstrate proper etiquette and knowledge of acceptable use of electronic information and products while in an individual classroom, a lab, or on the Internet or an intranet; **ISTE** 3a CITIZEN Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationship and community. 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
5.4s model respect for intellectual property when manipulating, morphing, and editing graphics, video, text, and sound; **ISTE** 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
5.5s understand and explain the negative impact of inappropriate technology use, including online bullying and harassment, hacking, intentional virus setting, invasion of privacy, and piracy of software, music, video, and other media; and **ISTE** 3a CITIZEN Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationship and community.	X					
5.6s understand and practice safe and responsible online behavior, personal security guidelines, digital etiquette, and acceptable use of technology. **ISTE** 3a CITIZEN Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationship and community. 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property. 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard VI. **All teachers demonstrate a thorough understanding of technology concepts, systems, and operations.**						
6.1k the correct use of hardware components, software programs and various systems and their connections; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.2k how to use software applications, including selecting and using software for a defined task; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.3k how to compare and contrast various network systems; and **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.4k how to apply basic design principles. **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.	X					
6.1s demonstrate knowledge and appropriate use of operating systems, hardware systems, network systems, virtual systems, learning systems, software applications, and communication and networking components; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
6.2s manipulate files by using appropriate naming conventions, file management (including folder structures and tagging), file conversions, and emerging digital organizational strategies; **ISTE** 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					
6.3s compare, contrast, and appropriately use various input, processing, output, and primary/secondary storage devices; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.4s navigate systems and applications accessing peripherals both locally and remotely; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.5s select and use software and Internet tools for a defined task according to quality, appropriateness, effectiveness, and efficiency; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.	X					
6.6s delineate and make necessary adjustments regarding compatibility issues, including but not limited to digital file formats and cross-platform connectivity; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
6.7s use and understand technology terminology appropriate to the task; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.		X		X		
6.8s perform basic software application functions, including but not limited to opening an application program and creating, modifying, printing, and saving documents; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.			X			
6.9s apply techniques and available resources (such as online help and knowledge bases) to troubleshoot minor technical problems with hardware and software; **ISTE** 4b COLLABORATOR Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.						X
6.10s evaluate and select technology tools based on licensing, application, and support; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.11s how to compare and contrast LANs, WANs, the Internet, and intranets; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.12s use a variety of input and storage devices such as mouse/track pad, keyboard, microphone, digital camera, digital voice recorder, scanner, disk/disc, modem, and controller; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X		X			

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
6.13s demonstrate keyboarding proficiency in technique and posture while building speed and accuracy; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.14s use digital keyboarding standards for data input such as one space after punctuation, the use of em/en dashes, and smart quotation marks; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.15s identify, create, and use files in various appropriate formats such as text, bitmapped/vector and raster graphics, image, video, and audio files; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.16s access, manage, and manipulate information from secondary storage and remote devices; **ISTE** 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					
6.17s use digital typography standards such as readable fonts, alignment, page setup, tabs, table properties, and ruler settings to plan, create, and edit word processing documents; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.	X					
6.18s use advanced computational and graphic components, trending tools, all data types, formulas and functions, and chart information to plan, create, and edit spreadsheet documents; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.		X		X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
6.19s plan, create, and edit databases by manipulating components, including defining fields, entering data, and designing layouts appropriate for reporting; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.20s use relevant publication standards and graphic design principles to plan, create, and edit a digital publication; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.	X					
6.21s demonstrate proficiency in the use of multimedia authoring programs by creating linear or nonlinear projects that incorporate text, audio, video, and graphics; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.	X					
6.22s integrate two or more technology tools to create a new digital project; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X		X		
6.23s differentiate between and demonstrate the appropriate use of a variety of graphic tools found in draw and paint applications and photo editing software; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.24s create a variety of spreadsheet layouts containing descriptive labels and page settings; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.			X			

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
6.25s use a variety of media, formats, devices, and virtual environments to select and store products; **ISTE** 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					
6.26s match the chart style to the data when creating and labeling charts; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.						X
6.27s discuss, explain, and evaluate the relevance of technology as it applies to college and career readiness, life-long learning, and daily living; **ISTE** 2b LEADER Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.	X					
6.28s select and use appropriate collaboration tools; **ISTE** 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.	X					
6.29s evaluate products for relevance to the assignment or task; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.	X					
6.30s use font attributes, color, white space, and graphics to ensure that products are appropriate for multiple communication media, including monitor display, Web, and print; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X		X		
6.31s discuss, explain, and evaluate the impact of technology applications through history and in various areas of study through research, interviews, and personal observation. **ISTE** 1c LEARNER Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
Standard VII. **All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Applications Texas Essential Knowledge and Skills (TEKS) into the curriculum.**						
7.1k planning techniques to ensure that students have time to learn the Technology Applications TEKS in order to meet grade-level benchmark expectations; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X	X	X		
7.2k where to find and how to use technological resources to implement the TEKS, to support instruction, to extend communication, to enhance classroom management, and to become more productive in daily tasks; **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness. 4d COLLABORATOR Demonstrate cultural competency when communicating with students, parents, and colleagues and interact with them as co-collaborators in student learning. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X	X	X		
7.3k instructional strategies for teaching the Technology Applications TEKS and for integrating them into the curriculum; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X	X	X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
7.4k strategies that students with diverse strengths and needs can use to determine word meaning in content-related texts; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6a FACILITATOR Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.		X	X	X		
7.5k strategies that students with diverse strengths and needs can use to develop content-area vocabulary; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6a FACILITATOR Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.		X	X	X		
7.6k strategies that students with diverse strengths and needs can use to facilitate comprehension before, during, and after reading content-related texts; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 6a FACILITATOR Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.		X	X	X		
7.7k how to evaluate the effectiveness of technology- based instruction; **ISTE** 2c LEADER Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
7.8k how to set goals for ongoing professional development in teaching the Technology Applications TEKS and integrating them into the curriculum. **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.	X					
7.1s use a range of instructional strategies for individuals and small/whole groups to plan applications-based technology lessons; **ISTE** 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.		X	X	X		
7.2s identify and address equity issues related to the use of technology, including but not limited to gender, ethnicity, language, disabilities, and student access to technology; **ISTE** 2b LEADER Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.	X					
7.3s plan, select, and implement instruction that allows students to use technology applications in problem-solving and decision-making situations; **ISTE** 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.		X	X	X		
7.4s use technology applications to develop and implement tasks that emphasize collaboration and teamwork among members of a structured group or project team; **ISTE** 4c COLLABORATOR Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.		X	X	X		
7.5s provide adequate time for teaching the Technology Applications TEKS; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X	X	X		
7.6s identify and use resources to keep current with technology education; **ISTE** 1c LEARNER Stay current with research that supports improved student learning outcomes, including findings from the learning sciences**.**	X					

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
7.7s create project-based learning activities that integrate the Technology Applications TEKS into the curriculum and meet the Technology Applications TEKS benchmarks; **ISTE** 4a COLLABORATOR Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6a FACILITATOR Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings. 6b FACILITATOR Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.		X	X	X		
7.8s follow guidelines for the legal and ethical use of technology resources; **ISTE** 3c CITIZEN Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.	X					
7.9s select and use developmentally appropriate instructional practices, activities, and materials to improve student learning of the Technology Applications TEKS; **ISTE** 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.		X	X	X		
7.10s use a variety of instructional strategies to ensure all students' reading comprehension of content-related texts, including helping students link the content of texts to their lives and connect related ideas across different texts; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.		X	X	X		

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
7.11s locate, retrieve, and retain content-related information from a range of texts and technologies; **ISTE** 3d CITIZEN Model and promote management of personal data and digital identity and protect student data privacy.	X					
7.12s use appropriate sources, such as dictionaries, thesauruses, glossaries, and search engines to locate the meanings and pronunciations of unfamiliar content- related words; **ISTE** 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning.						X
7.13s use technology tools to perform administrative tasks such as taking attendance, maintaining grade books, and facilitating communication; **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.	X					
7.14s use formal and informal assessment methods to evaluate appropriately students' projects and portfolios; **ISTE** 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.					X	
7.15s collect observable and measurable data to gauge student progress and adjust instruction in Technology Applications; **ISTE** 7c ANALYST Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.					X	X

	ELE 520	ELE 521	ELE 522	ELE 523	ELE 525	ELE 584
7.16s conduct an ongoing self-assessment of strengths and weaknesses in the knowledge and skills of Technology Applications; **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.	X					
7.17s develop and implement an individual plan for professional growth in the knowledge and skills of Technology Applications; **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.	X					
7.18s incorporate new strategies to improve classroom instruction in Technology Applications. **ISTE** 1a LEARNER Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness. 1c LEARNER Stay current with research that supports improved student learning outcomes, including findings from the learning sciences. 5a DESIGNER Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. 5b DESIGNER Design authentic learning activities that align with content area standards and use digital tool sand resources to maximize active, deep learning. 5c DESIGNER Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. 6c FACILITATOR Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. 6d FACILITATOR Model and nurture creativity and creative expression to communicate ideas, knowledge or connections. 7a ANALYST Provide alternative ways for students to demonstrate competency and reflect on their learning using technology. 7b ANALYST Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.		X	X	X		

Standards Correlation Chart for Generalist 4-8: ENGLISH/LANGUAGE ARTS/READING

Please indicate where in the curriculum your program addresses the relevant Core Subjects 4/8 standards; TAC§228.30 (a)

Standard I: Oral Language: Teachers of students in grades 4-8 understand the importance of oral language, know the developmental processes of oral language, and provide a variety of instructional opportunities for young students to develop listening and speaking skills.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
1.1K basic linguistic concepts (e.g., phonemes, segmentation) and developmental stages in acquiring oral language, including stages in phonology, semantics, syntax, and pragmatics, recognizing that individual variations occur;			X
1.2K how to build on students' cultural, linguistic, and home backgrounds to enhance their oral language development;			X
1.3k skills for speaking to different audiences for various purposes;			X
1.4K relationships between the development of oral language and the development of reading			X
1.5k similarities and differences between oral and written language and how to promote students' awareness of these similarities and differences;			X
1.6k active, purposeful listening in a variety of contexts;			X
1.7k the use of critical listening to analyze and evaluate a speaker's message;			X
1.8k listening skills for enjoying and appreciating spoken language;			X
1.9k the use of oral language for gaining and sharing knowledge of one's own culture and the cultures of others;			X
1.10k the use of technology in promoting oral communication skills; and			X
1.11k how to use effective informal and formal assessments to evaluate students' oral language skills, and recognize when speech or language delays or differences warrant in-depth evaluations and additional help or intervention.			X

Standard I: Oral Language: Teachers of students in grades 4-8 understand the importance of oral language, know the developmental processes of oral language, and provide a variety of instructional opportunities for young students to develop listening and speaking skills.	**RDG 519**	**RDG 508**	**PACT**
Application: What Teachers Can Do			
1.1s plan, implement, and monitor instruction that is based on informal and formal assessment of students' progress in oral language development and addresses individual students' needs, strengths, and interests;	X		X
1.2s acknowledge students; current oral language skills and use specific language instruction to build on these skills and increase students' oral language proficiency;	X		X
1.3s strengthen students' vocabulary and narrative skills in spoken language and teach students to recognize connections between spoken and printed language;	X		X
1.4s provide explicit, systematic oral language instruction and support students' learning and use of oral language through meaningful and purposeful activities implemented one-to-one and in a group;	X		X
1.5s provide oral language instruction by modeling and reading aloud using language structures and pronunciations commonly associated with academic English;	X		X
1.6s select and use instructional materials and strategies that promote students' oral language development; that respond to students' individual strengths, needs, and interests; and that reflect cultural diversity'	X		X
1.7s provide instruction that interrelates oral and written language to promote students' reading proficiency and learning (e.g., preview-review, discussion, questioning);	X		X
1.8s provide students with opportunities to engage in active, purposeful listening in a variety of contexts;	X		X
1.9s provide students with opportunities to adapt their spoken language for various audiences purposes, and occasions;	X		X

Standard I: Oral Language: Teachers of students in grades 4-8 understand the importance of oral language, know the developmental processes of oral language, and provide a variety of instructional opportunities for young students to develop listening and speaking skills.			
1.10s provide students with opportunities to evaluate the content and effectiveness of their own spoken messages and the messages of others;	X		X
1.11s support students' development of oral communication skills through the use of technology;	X		X
1.12s collaborate with students' families/caregivers about ways to encourage their children's language development; and	X		X
1.13s collaborate with other professionals and continually seek implications for practice from convergent research about oral language development.	X		X

Standard II. Foundations of Reading: Teachers of students in grades 4-8 understand the foundations of reading and early literacy development.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
2.1k the significance of phonological and phonemic awareness for reading and typical patterns in the development of phonological and phonemic awareness, and recognize that individual variations occur (A student who has phonological awareness hears distinct words, syllables, and sounds in language separate from print. A student who has phonemic awareness can identify individual sounds in spoken words, blend together the separated sounds of spoken words to form words, and play with the sounds of spoken language by adding or taking away sounds from words.).			X
2.2k the elements of the alphabetic principle (e.g., letter names, graphophonemic knowledge, the relationship of the letters in printed words to spoken language) and typical patterns of students' alphabetic skills development, and recognize that individual variations occur;			X
2.3k that not all written languages are alphabetic and that many alphabetic languages are more phonetically regular than English, and know the significance of this for students' literacy development in English;			X
2.4k that literacy acquisition generally develops in a predictable pattern from prereading (emergent literacy) to conventional literacy, recognizing that individual variations occur;			X
2.5k that literacy development occurs in multiple contexts through reading, writing, and the use of oral language;			X
2.6k a wide range of literature and other texts appropriate for students;			X
2.7k the importance of modeling and encouraging reading for pleasure and lifelong learning;	X		X

Standard II. Foundations of Reading: Teachers of students in grades 4-8 understand the foundations of reading and early literacy development.	**RDG 519**	**RDG 508**	**PACT**
2.8k the difference between guided and independent practice in reading;	X		X
2.9k the importance of reading as a skill in all content areas;		X	X
2.10k the use of technology in promoting literacy; and		X	X
2.11k how to select, administer, analyze, and use results from informal and formal assessments of literacy acquisition, including assessments of phonological and phonemic awareness and alphabetic skills.			X
Application: What Teachers Can Do			
2.1s plan, implement, and monitor instruction based on the continuous use of formal and informal assessment of individual students' literacy acquisition, including phonological and phonemic awareness and alphabetic skills;	X		X
2.2s respond to individual students' needs by providing focused instruction to promote literacy acquisition, including phonological and phonemic awareness, alphabetic skills, and concepts about print;	X		X
2.3s select and use instructional materials that build on students' current language skills to promote development from emergent literacy to conventional literacy;	X		X
2.4s provide multiple opportunities for students to listen to and respond to a wide variety of children's and young people's literature, both fiction and nonfiction, and to recognize characteristics of various types of narrative and expository texts;	X		X
2.5s engage students in varied reading experiences and encourage students to interact with others about their reading;	X		X
2.6s provide students with frequent opportunities for guided and independent practice in reading;	X		X

Standard II. Foundations of Reading: Teachers of students in grades 4-8 understand the foundations of reading and early literacy development.	**RDG 519**	**RDG 508**	**PACT**
2.7s model and encourage reading for pleasure and lifelong learning;	X		X
2.8s provide many opportunities for students to read and write to promote their development of an extensive reading and writing vocabulary;		X	X
2.9s teach students strategies for selecting their own books for independent reading;	X		X
2.10s select and use a variety of materials to teach students about authors and different purposes for writing;		X	X
2.11s use technology to promote students' literacy and teach students to use technology to access a wide range of appropriate narrative and expository texts;		X	X
2.12s collaborate with families/caregivers about literacy development and ways to encourage their children's literacy development at home; and		X	X
2.13s collaborate with other professionals and continually seek implications for practice from current research about literacy acquisition.		X	X

Standard III. Word Analysis Skills and Reading Fluency: Teachers understand the importance of word analysis (including, blending, structural analysis, and sight word vocabulary) and reading fluency and provide many opportunities for students to practice and improve their word analysis skills and reading fluency.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
3.1k that many students develop work analysis skills (e.g., decoding, blending, structural analysis, sight word vocabulary and reading fluency in a predictable sequence, recognizing that individual variations occur;		X	X
3.2k the importance of word analysis skills in reading fluency for reading comprehension;		X	X
3.3 k the continuum of word analysis skills and grade-level expectations for these skills		X	X
3.4k factors affecting students' word analysis skills and reading fluency (e.g., home language, learning disability);		X	X
3.5k the norms for reading fluency that have been established for various age and grade levels;			X
3.6k important phonetic elements and conventions of the English language;			X
3.7k strategies for decoding and determining the meaning of increasingly complex words;		X	X
3.8k how students develop reading fluency and that fluency involves rate, accuracy, and intonation;		X	X
3.9k instructional strategies and practices for promoting students' word analysis skills and reading fluency;		X	X
3.10k differences in students' development of word analysis skills and reading fluency, and instructional practices for meeting students' individual needs in these areas; and		X	X
3.11k a variety of informal and formal procedures for assessing on an ongoing basis students' word analysis skills and reading fluency.		X	X

Standard III. Word Analysis Skills and Reading Fluency: Teachers understand the importance of word analysis (including, blending, structural analysis, and sight word vocabulary) and reading fluency and provide many opportunities for students to practice and improve their word analysis skills and reading fluency.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
3.1s select and use appropriate formal and informal assessments to identify and monitor an ongoing basis students' word analysis skills and reading fluency, and use assessment results to help plan instruction;		X	X
3.2s apply norms and expectations for word analysis skills and reading fluency to evaluate students' reading performance;		X	X
3.3s teach the phonetic analysis of increasingly complex words;	X		X
3.4s teach students to recognize high-frequency irregular words by selecting words that appear frequently in texts and reviewing difficult words often;	X		X
3.5s provide instruction in how to use structural cues to recognize compound words, base words, and inflections (e.g. prefixes, suffixes);		X	X
3.6s teach student to use knowledge of word order (English syntax) and context to support word identification and confirm word meaning;		X	X
3.7s provide students with frequent opportunities for fluency development by having them read independent-level texts, read orally from familiar test, engage in repeated reading activities, and read silently for increasingly long periods;	X		X
3.8s provide opportunities for students to improve their reading fluency through self-correction;	X		X
3.9s select and use appropriate instructional strategies and materials to promote word analysis skills and reading fluency for students reading at different levels;	X		X
Standard III. Word Analysis Skills and Reading Fluency: Teachers understand the importance of word analysis (including, blending, structural analysis, and sight word vocabulary) and reading fluency and provide many opportunities for students to practice and improve their word analysis skills and reading fluency.			X
3.10s collaborate with families/caregivers about ways they can support and promote their children's word analysis skills and reading fluency; and	X		X
3.11s collaborate with other professionals and continually seek implications for practice from convergent research about the development of word analysis skills and reading fluency.	X		X

Standard IV. Reading Comprehension: Teachers understand the importance of reading for understanding, know the components of comprehension, and teach students strategies for improving comprehension.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
4.1k the continuum of reading comprehension skills and grade-level expectations for these skills;	X		X
4.2k reading comprehension as an active process of constructing meaning;	X		X
4.3k factors affecting students' reading comprehension, such as oral language development, word analysis skills, prior knowledge, previous reading experiences, fluency, ability to monitor understanding, and the characteristics of specific texts (e.g., structure, vocabulary);	X		X
4.4k the role of visualization skills in reading comprehension;	X		X
4.5k the relationship between extensive reading, vocabulary development, and reading comprehension;	X		X
4.6k the use of metacognitive skills in reading comprehension;	X		X
4.7k literary genres (e.g., historical fiction, poetry, myths, fables) and their characteristics;	X		X
4.8k levels of reading comprehension and how to model and teach literal comprehension skills (e.g., identifying stated main idea, details, sequence, and cause-and-effect relationships);	X		X
4.9k how to model and teach inferential comprehension skills (e.g., inferring main ideas, comparisons, unstated cause-and-effect relationships; summarizing; making predictions; drawing conclusions; making generalizations);	X		X
4.10k how to model and teach evaluative comprehension skills (e.g., distinguishing between fact and opinion; detecting faculty reasoning; reacting to a text's content, characters, and use of language);	X		X

Standard IV. Reading Comprehension: Teachers understand the importance of reading for understanding, know the components of comprehension, and teach students strategies for improving comprehension.	**RDG 519**	**RDG 508**	**PACT**
4.11k comprehension skills and strategies for understanding and interpreting different types of written materials including narratives, expository texts, technical writing, and content-area textbooks;	X		X
4.12k different purposes for reading and associated reading strategies;		X	X
4.13k how to interpret and evaluate information presented in various formats (e.g., maps, tables, graphs);		X	X
4.14k the importance of providing students with direct, explicit instruction in the use of comprehension strategies;		X	X
4.15k a range of strategies that students can use to facilitate comprehension before, during, and after reading (e.g., previewing, making predictions, questioning, self-monitoring, rereading, mapping, using reading journals, discussing texts);		X	X
4.16k the importance of locating the meanings, pronunciations, and derivations of unfamiliar words using dictionaries, glossaries, and other sources;		X	X
4.17k literary response and analysis and ways to promote students' development of literary response and analysis;		X	X
4.18k strategies for helping students comprehend abstract content and ideas in written materials (e.g., by using manipulatives , examples, diagrams);		X	X
4.19k the reading comprehension needs of students with different needs (e.g., English Language Learners, students with disabilities) and how to provide instruction for those students;		X	X
4.20k the use of technology in promoting reading comprehension; and		X	X
4.21k a variety of informal and formal procedures for monitoring and assessing students' reading comprehension and instructional practices to meet individual students' needs.		X	X

Standard IV. Reading Comprehension: Teachers understand the importance of reading for understanding, know the components of comprehension, and teach students strategies for improving comprehension.	**RDG 519**	**RDG 508**	**PACT**
Application: What Teachers Can Do			
4.1s select and use appropriate informal and formal assessments to evaluate students' reading comprehension, and provide focused instruction in reading comprehension based on individual students' strengths and needs;	X		X
4.2s use a variety of instructional strategies to enhance students' reading comprehension, including helping students link the content of texts to their lives and connect related ideas across different texts;	X		X
4.3s use students' prior knowledge to promote reading comprehension;	X		X
4.4s model and provide direct, explicit instruction in the use of strategies for improving reading comprehension (e.g., using work analysis skills, previewing texts, self-monitoring, visualizing, retelling);	X		X
4.5s use guided and independent reading to promote students' comprehension skills;	X		X
4.6s promote students' development and use of metacognitive skills to enhance reading comprehension;	X		X
4.7s use various communication modes (e.g., written, oral) to promote students' reading comprehension;	X		X
4.8s provide frequent opportunities and encouragement for students to engage in silent reading both at school and at home;	X		X
4.9s guide students to generate questions and apply knowledge of topics addressed in reading selections, both fiction and nonfiction;	X		X
4.10s provide time for students to engage in extended reading of a wide range of materials, including expository texts and various literary genres;	X		X
4.11s use instructional strategies that help students increase their reading vocabulary;		X	X

Standard IV. Reading Comprehension: Teachers understand the importance of reading for understanding, know the components of comprehension, and teach students strategies for improving comprehension.	**RDG 519**	**RDG 508**	**PACT**
4.12s guide students to increase knowledge of their own culture and the cultures of others through reading;		X	X
4.13s provide instruction in how to use graphics (e.g., tables, charts, maps, signs), informational texts, and technologies (e.g., the Internet) to acquire information;		X	X
4.14s provide opportunities for students to apply comprehension strategies to literature and to respond to literature in a variety of ways (e.g., using reading journals, discussions), including relating prior knowledge to literary texts;		X	X
4.15s tech elements of literary analysis, such as story elements and features of different literary genres;		X	X
4.16s provide instruction in comprehension skills that support students' transition from "learning to read" to "reading to learn" (e.g., recognizing different types and functions of texts, matching comprehension strategies to different types of text and different purposes for reading);		X	X
4.17s teach students how to locate, retrieve, and retain information from a range of texts and technologies;		X	X
4.18s teach students how to locate the meanings, pronunciations, and derivations of unfamiliar words using dictionaries, glossaries, and other sources;		X	X
4.19s communicate with families/caregivers about reading comprehension and collaborate with them to promote their children's reading comprehension; and		X	X
4.20s collaborate with other professionals and continually seek implications for practice from convergent research about the development of reading comprehension skills.		X	X

Standard V: Writing Language: Teachers understand that writing is a developmental process and provide instruction that helps students develop competence in written communication.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			X
5.1k predictable stages in the development of written language and writing conventions, including the physical and cognitive processes involved in letter formation, word writing, sentence construction, spelling, punctuation, and grammatical expression, while recognizing that individual variations occur;			X
5.2k writing process ,including the use of self-assessment in writing;			X
5.3k the appropriate use of writing conventions and appropriate grammar and usage for communicating clearly and effectively in writing;			X
5.4k the importance of spelling and graphophonemic knowledge for success in reading and writing;			X
5.5k the stages of spelling development (prephonetic, phonetic, transitional, and conventional) and how and when to support students' development from one stage to the next ;			X
5.6k writing for a variety of audiences, purposes, and settings;		X	X
5.7k the differences between first draft writing and writing for publication		X	X
5.8k appropriate instructional strategies and sequences for developing students' writing skills;		X	X
5.9k the development of writing in relation to listening, speaking, and reading, and know instructional strategies that connect these various aspects of language;		X	X

Standard V: Writing Language: Teachers understand that writing is a developmental process and provide instruction that helps students develop competence in written communication.	**RDG 519**	**RDG 508**	**PACT**
5.10k the similarities and differences between language (e.g., syntax, vocabulary) used in spoken and written English and how to help students recognize these similarities and differences to promote effective use of written English conventions;		X	X
5.11k the benefits of technology for teaching writing and writing for publication; and		X	X
5.12k informal and formal procedures for ongoing monitoring and assessment of writing development and writing conventions, and know how to use assessment results to help plan instruction for individuals and groups.		X	X
Application: What Teachers Can Do			X
5.1s formally and informally assess students' writing development, including their development of writing conventions, and provide focused instruction to address students' strengths, needs, and interests;		X	X
5.2s create an environment in which students are motivated to express their ideas in writing;		X	X
5.3s teach purposeful, meaningful writing in connection with listening, speaking, and reading;		X	X
5.4s provide instruction in various stages of writing, including prewriting, drafting, editing, and revising;		X	X
5.5s use strategies to promote students' recognition of the practical uses of writing;		X	X
5.6s provide opportunities for students to write in a variety of forms and modes for various purposes, audiences, and settings';		X	X
5.7s provide opportunities for students to self-assess their writing (e.g., for clarity, comprehensiveness, interest to audience) and their development as writers;		X	X

Standard V: Writing Language: Teachers understand that writing is a developmental process and provide instruction that helps students develop competence in written communication.	**RDG 519**	**RDG 508**	**PACT**
5.8s provide opportunities for students to elicit critiques of their writing from others;	X		X
5.9s provide hands-on activities to help students develop and refine the fine-motor skills necessary for writing, including teaching pencil grip, paper position, and beginning stroke;	X		X
5.10s provide direct instruction and guided practice in English writing conventions (e.g., grammar, spelling, capitalization, punctuation) and help students recognize that although first drafts are not always edited and revised, accuracy in conventions is necessary when preparing a piece for publication;	X		X
5.11s provide systematic spelling instruction in common spelling patterns based on phonics skills already taught and provide opportunities for students to use and develop their spelling skills in the context of meaningful written expression;	X		X
5.12s model writing as an enjoyable activity and as a tool for lifelong learning;	X		X
5.13s provide instruction in the use of technology that facilitates written communication;	X		X
5.14s communicate with families/caregivers about students' writing development and collaborate with them to promote their children's writing development; and	X		X
5.15s collaborate with other professionals and continually seek implications for practice from convergent research about students' development of written communication skills and writing conventions.	X		X

Standard VI: Study and Inquiry Skills: Teachers understand the importance of study and inquiry skills as tools for learning and promote students' development in applying study and inquiry skills.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
6.1k study and inquiry skills and their significance for student learning and achievement (e.g., using text organizers; taking notes; outlining; drawing conclusions; applying test-taking strategies; previewing; setting purposes for reading; locating, organizing, evaluating, and communicating information; interpreting and using graphic sources of information);		X	X
6.2k instructional practices that promote students' acquisition and use of study and inquiry skills across the curriculum; and		X	X
6.3k grade-level expectations and procedures for assessing students' study and inquiry skills.		X	X
Teacher Knowledge: What Teachers Know			
6.1s use ongoing assessment and knowledge of grade-level expectations to identify students' needs in regard to study and inquiry skills and to plan instruction;		X	X
6.2s respond to students' needs by providing direct, explicit instruction to promote the acquisition and use of study and inquiry skills;		X	X
6.3s provide students with varied and meaningful opportunities to learn and use study and inquiry skills and to recognize the importance of using these skills to enhance their achievement across the curriculum;		X	X
6.4s communicate with families/caregivers about students' study and inquiry skills development and collaborate with them to promote their children's development in these areas; and		X	X
6.5s collaborate with other professional and continually seek implications for practice from convergent research about student's development of study and inquiry skills.		X	X

Standard VII: Viewing and Representing: Teachers understand how to interpret, analyze, evaluate, and produce visual images and messages in various media and to provide students with opportunities to develop skills in this area.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
7.1k characteristics and functions of different types of media (e.g., film, print);		X	X
7.2k how different types of media influence and inform;		X	X
7.3k procedures and criteria for analyzing and evaluating visual images, messages, and meanings;		X	X
7.4k procedures for producing visual images, messages, and meanings to communicate with others;		X	X
7.5k instructional practices that promote students' ability to interpret, analyze, evaluate, and produce visual images, messages, and meanings; and		X	X
7.6k grade-level expectations and procedures for assessing students' skills in interpreting, analyzing, and producing visual images, messages, and meanings.		X	X
Application: What Teachers Can Do			
7.1s use ongoing assessment and knowledge of grade-level expectations to plan instruction and to identify students' needs regarding the interpretation, analysis, and production of visual images, messages, and meanings;		X	X
7.2s compare and contrast print, visual, and electronic media (e.g., films and written stories);		X	X
7.3s evaluate how visual image makers (e.g., illustrators, documentary filmmakers, political cartoonists, news photographers) represent meanings and provide students with varied opportunities to analyze and interpret visual images;		X	X
7.4s teach students to analyze visual images makers' choices (e.g., related to style, elements, medium) and evaluate how these choices help to represent or extend meaning;		X	X

Standard VII: Viewing and Representing: Teachers understand how to interpret, analyze, evaluate, and produce visual images and messages in various media and to provide students with opportunities to develop skills in this area.	**RDG 519**	**RDG 508**	**PACT**
7.5s provide students with opportunities to interpret events and ideas based on information from maps, charts, graphics, video segments, and technology presentations and to use media to compare ideas and points of view;		X	X
7.6s teach students how to select, organize, and produce visuals to complement and extend meaning;		X	X
7.7s provide students with opportunities to use technology to produce various types of communications (e.g., class newspapers, multimedia reports, video reports) and help students assess how language, medium, and presentation contribute to the message;		X	X
7.8s communicate with families/caregivers about students' progress in developing skills for interpreting, analyzing, and producing visual images, messages, and meanings and collaborate with them to promote their children's development in these areas; and		X	X
7.9s collaborate with other professionals and continually seek implications for practice from convergent research about students' development of skills for interpreting, analyzing, and producing visual images, and meanings.		X	X

Standard VIII: Assessment of Developing Literacy: Teachers understand the basic principles of assessment and use a variety of literacy assessment practices to plan and implement instruction.	**RDG 519**	**RDG 508**	**PACT**
Teacher Knowledge: What Teachers Know			
8.1k the characteristics and uses of formal and informal literacy assessments (e;g., screening devices, norm-referenced achievement tests, criterion-referenced state tests, curriculum-based reading assessments, informal reading inventories);	X		X
8.2k formative and summative uses of assessment;	X		X
8.3k how to select and use multiple, ongoing assessments to monitor literacy development and identify students' strengths and needs;	X		X
8.4k how to use assessment to determine when a student needs additional help or intervention to bring the student's performance to grade level, based on state content and performance standards for reading, writing, listening, and speaking that comprise the Texas Essential Knowledge and Skills (TEKS);	X		X
8.5k the reciprocal nature of assessment and instruction and how to use assessment results to select appropriate instructional strategies and materials (e.g., basals, supplemental programs, trade books) to ensure the literacy development of all students;	X		X
8.6k how to determine students' independent, instructional, and frustration reading levels and recognize the importance of using this information when selecting and adapting reading materials for individual students and guiding their selection of independent reading materials; and	X		X
8.7k how students' use of self-evaluation and self-monitoring procedures can enhance their literacy development.	X		X
Application: What Teachers Can Do			
8.1s use multiple, ongoing assessments to plan literacy instruction and monitor students' literacy development;	X		X

Standard VIII: Assessment of Developing Literacy: Teachers understand the basic principles of assessment and use a variety of literacy assessment practices to plan and implement instruction.	**RDG 519**	**RDG 508**	**PACT**
8.2s analyze students' errors in reading and writing and use the results of this analysis as a basis for future instruction;	X		X
8.3s use ongoing assessment and knowledge of the TEKS to determine when a student may be in need of classroom interventions or specialized reading instruction and develop an appropriate instructional plan;	X		X
8.4s teach students to use self-evaluation and self-monitoring to enhance their own literacy development;	X		X
8.5s communicate with families/caregivers about students' progress in literacy development using a variety of means, including samples of students' work, and collaborate with them to promote their children's literacy development; and	X		X
8.6s collaborate with other professionals and continually seek implications for practice from convergent research about assessment of students' developing literacy.	X		X

Standards Correlation Chart for the Core Subjects 4/8 Certificate (MATHEMATICS)
Content Mastery

Please indicate where in the curriculum your program addresses the relevant 4/8 standards; TAC§228.30 (a)

Standard I: Number Concepts: The mathematics teacher understands and uses numbers, number systems and their structure, operations, and algorithms, quantitative reasoning, and technology appropriate to teacher the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in order to prepare students to use mathematics.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
1.1k the structure of number systems, the development of a sense of quantity, and the relationship between quantity and symbolic representation;	X	X
1.2k the connections of operations, algorithms, and relations with their associated concrete and visual representations;	X	X
1.3k the relationship among number concepts, operations and algorithms, and the properties of numbers, including ideas of number theory;	X	X
1.4k how to model, construct, and solve problems within and outside of mathematics; and	X	X
1.5k how number concepts, operations, and algorithms are developmental and connected across grade levels.	X	X
Application: What Teachers Can Do		
1.1s compare and contrast numeration systems;	X	X
1.2s analyze, explain, and model the structure of numeration systems and, in particular, the role of place value and zero in the base ten system;	X	X
1.3s demonstrate a sense of quantity and number for whole numbers, integers, rational numbers, and real numbers;	X	X
1.4s analyze, explain, and model the four basic operations with whole numbers, integers, and rational numbers;	X	X

Standard I: Number Concepts: The mathematics teacher understands and uses numbers, number systems and their structure, operations, and algorithms, quantitative reasoning, and technology appropriate to teacher the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in order to prepare students to use mathematics.	**ELE 521**	**PACT**
1.5s recognize, model, and describe different ways to interpret the four basic operations involving whole numbers, integers, and rational numbers;	X	X
1.6s analyze and describe relationships among number properties, operations, and algorithms involving the four basic operations with whole and rational numbers;	X	X
1.7s work proficiently with real numbers and demonstrate, explain, and model how some situations that have no solution in the whole, integer, or rational number systems have solutions in the real number system;	X	X
1.8s analyze error patterns that often occur when students use algorithms to perform operations;	X	X
1.9s recognize and analyze appropriate nontraditional algorithms for the four basic operations with whole numbers;	X	X
1.10s describe ideas from number theory (e.g., prime numbers, composite numbers, greatest common factors) as they apply to whole numbers, integers, and rational numbers and use these ideas in problem situations	X	X
1.11s use whole numbers and rational numbers to describe and quantify phenomena such as time, temperature, and **money**; and	X	X
1.12s apply place value and other number properties to develop techniques of mental mathematics and computational estimation.	X	X
1.13s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X

Standard I: Number Concepts: The mathematics teacher understands and uses numbers, number systems and their structure, operations, and algorithms, quantitative reasoning, and technology appropriate to teacher the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in order to prepare students to use mathematics.	**ELE 521**	**PACT**
1.14s demonstrate a sense of equivalency among different representations of rational numbers;	X	X
1.15s select appropriate representations of real numbers (e.g., fractions, decimals, percents, roots, exponents, scientific notation) for particular situations and justify that selection;	X	X
1.16s analyze, explain, and model the four basic operations involving integers and real numbers;	X	X
1.17s analyze and describe relationships between number properties, operations, and algorithms for the four basic operations involving integers, rational numbers, and real numbers;	X	X
1.18s work with complex numbers and demonstrate, explain, and model how some situations that have no solution in the integer, rational, or real number systems have solutions in the complex number system;	X	X
1.19s explain and justify the traditional algorithms for the four basic operations with integers, rational numbers, and real numbers and analyze common error patterns that may occur in their application;	X	X
1.20s use integers, rational numbers, and real numbers to describe and quantify phenomena such as **money**, length, area, volume, and density;	X	X
1.21s extend and generalize the operations on rationals and integers to include exponents, their operations, their properties, and their applications to the real numbers.	X	X

Standard II: Patterns and Algebra: The mathematics teacher understands and uses patterns, relations, functions, algebraic reasoning, analysis and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
2.1k how to use algebraic concepts and reasoning to investigate patterns, make generalizations, formulate mathematical models, make predictions, and validate results;	X	X
2.2k how to use properties, graphs, and applications of relations and functions to analyze, model, and solve problems;	X	X
2.3k the concept of and relationships among variables, expressions, equations, inequalities, and systems in order to analyze, model, and solve problems;	X	X
2.4k the connections among geometric, graphic, numeric, and symbolic representations of functions and relations;		X
2.5k that patterns are sometimes misleading;	X	X
2.6k that in many situations, a pattern is only a trend and is accompanied by random variation from the trend; and		X
2.7k how patterns, relations, functions, algebraic reasoning, and analysis are developmental and connected across grade levels.	X	X
Application: What Teachers Can Do		
2.1s use inductive reasoning to identify, extend, and create patterns using concrete models, figures, numbers, and algebraic expressions;	X	X
2.2s formulate implicit and explicit rules to describe and construct sequences verbally, numerically, graphically, and symbolically;	X	X
2.3s illustrate concepts of relations and functions using concrete models, tables, graphs, and symbolic expressions;	X	X
2.4s apply relations and functions to represent mathematical and real-world situations;	X	X

Standard II: Patterns and Algebra: The mathematics teacher understands and uses patterns, relations, functions, algebraic reasoning, analysis and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
2.5s translate problem-solving situations into expressions and equations involving variables and unknown	X	X
2.6s model and solve problems, including proportion problems, using concrete, numeric, tabular, graphic, and algebraic methods; and	X	X
2.7s recognize misleading patterns	X	X
2.8s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X
2.9s make, test, validate, and use conjectures about patterns and relationships in data presented in tables, sequences, or graphs;	X	X
2.10s use linear and nonlinear functions and relations, including polynomial, absolute value, trigonometric, rational, radical, exponential, logarithmic, and piecewise functions, to model problems;	X	X
2.11s use a variety of representations and methods (e.g., numerical methods, tables, graphs, algebraic techniques) to solve linear and nonlinear equations, inequalities, and systems;	X	X
2.12s use transformations to illustrate properties of functions and relations and to solve problems;	X	X
2.13s give appropriate justification of the manipulation of algebraic expressions, equations, and inequalities;	X	X
2.14s relate the concept of limit as a conceptual foundation of calculus to middle school mathematics;	X	X
2.15s relate the rate of change as a conceptual foundation of calculus to middle school mathematics;	X	X
2.16s relate the area under a curve as a conceptual foundation of calculus to middle school mathematics; and	X	X
2.17s work with patterns with random variations.	X	X

Standard III: Geometry and Measurement: The mathematics teacher understands and uses geometry, spatial reasoning, measurement concepts and principles, and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
3.1k how to use spatial reasoning to investigate concepts such as direction, orientation, perspective, shape, and structure;	X	X
3.2k the use of mathematical reasoning to develop, generalize, justify, and prove geometric relationships;	X	X
3.3k connections among geometric ideas and number concepts, measurement, probability and statistics, algebra, and analysis;	X	X
3.4k measurement as a process;	X	X
3.5k methods of approximation and estimation and the effects of error on measurement;	X	X
3.6k how to use measurement to collect data, to recognize relationships, and to develop generalizations, including formulas;	X	X
3.7k how to locate, develop, and solve real-world problems using measurement and geometry concepts;	X	X
3.8k how to explore geometry from synthetic, coordinate, and transformational approaches;	X	X
3.9k logical reasoning, justification, and proof in relation to the axiomatic structure of geometry; and		X
3.10k how geometry, spatial reasoning, and measurement concepts and principles are developmental and connected across grade levels.	X	X
Application: What Teachers Can Do		X
3.1s extend the understanding of shape in terms of dimension, direction, orientation, perspective, and relationships among these concepts;	X	X

Standard III: Geometry and Measurement: The mathematics teacher understands and uses geometry, spatial reasoning, measurement concepts and principles, and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
3.2s develop, explain, and use formulas to find length, perimeter, area, and volume of basic geometrical figures;	X	X
3.3s explain and illustrate the use of numbers and units of measurement for quantities such as temperature, money, percent, speed, and acceleration;	X	X
3.4s develop, justify, and use conversions within and between different measurement systems;	X	X
3.5s use translations, rotations, reflections, dilations, and contractions to illustrate similarities, congruencies, and symmetries of figures; and	X	X
3.6s identify attributes to be measured, quantify the attributes by selecting and using appropriate units, and communicate information about the attributes using the unit measure	X	X
3.7s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X
3.8s develop, justify, and perform geometric constructions using compass, straight-edge, and reflection devices and other appropriate technology;	X	X
3.9s investigate and prove geometric relationships within the axiomatic structure of Euclidean geometry;	X	X
3.10s analyze and solve problems involving one-, two-, and three-dimensional objects such as lines, angles, circles, triangles, polygons, cylinders, prisms, and spheres;	X	X
3.11s analyze the relationship among three-dimensional figures and related two dimensional representations (e.g., projections, cross-sections, nets) and use these representations to solve problems;	X	X

Standard III: Geometry and Measurement: The mathematics teacher understands and uses geometry, spatial reasoning, measurement concepts and principles, and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
3.12s apply measurement concepts and dimensional analysis to derive units and formulas for a variety of situations, including rates of change of one variable with respect to another;	X	X
3.13s use symmetry to describe tesselations and show how they can be used to illustrate concepts, properties, and relationships;	X	X
3.14s relate geometry to algebra and trigonometry by using the Cartesian coordinate system and use this relationship to solve problems; and	X	X
3.15s use calculus concepts to answer questions about rates of change, areas, volumes, and properties of functions and their graphs.	X	X

Standard IV: Probability and Statistics: The mathematics teacher understands and uses probability and statistics, their applications, and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
4.1k how to use graphical and numerical techniques to explore data, characterize patterns, and describe departures from patterns;		X
4.2k how to design experiments and surveys to answer questions and solve problems;		X
4.3k the theory of probability and its relationship to sampling and statistical inference;	X	X
4.4k statistical inference and how it is used in making and evaluating predictions; and	X	X
4.5k how probability and statistics are developmental and connected across grade levels.	X	X
Application: What Teachers Can Do		
4.1s investigate and answer questions by collecting, organizing, and displaying data from real-world situations;	X	X
4.2s support arguments, make predictions, and draw conclusions using summary statistics and graphs to analyze and interpret one-variable data;	X	X
4.3s communicate the results of a statistical investigation using appropriate language;	X	X
4.4s investigate real-world problems by designing, administering, analyzing and interpreting surveys;	X	X
4.5s use the concepts and principles of probability to describe the outcome of simple and compound events;	X	X
4.6s explore concepts of probability through data collection, experiments, and simulations;	X	X
4.7s generate, simulate, and use probability models to represent a situation; and	X	X
4.8s use the graph of the normal distribution as a basis for making inferences about a population	X	X

Standard IV: Probability and Statistics: The mathematics teacher understands and uses probability and statistics, their applications, and technology appropriate to teach the statewide curriculum [TEKS] in order to prepare students to use mathematics.	**ELE 521**	**PACT**
4.9s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X
4.10s investigate real-world problems by designing, conducting, analyzing, and interpreting statistical experiments;	X	X
4.11s develop and justify concepts and measures of central tendency (e.g., mean, median, mode) and dispersion (e.g., range, interquartile range, variance, standard deviation) and use those measures to describe a set of data;	X	X
4.12s calculate and interpret percentiles and quartiles;	X	X
4.13s explore, describe, and analyze bivariate data using techniques such as scatter plots, regression lines, correlation coefficients, and residual analysis;	X	X
4.14s explain and use precise probability language to make observations and draw conclusions from single variable data and to describe the level of confidence in the conclusion;	X	X
4.15s determine probability by constructing sample spaces to model situations; and	X	X
4.16s make inferences about a population using the binomial and geometric distributions.	X	X

Standard V: Mathematical Processes: The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
5.1k logical reasoning, justification, and proof in relation to the structure of and relationships within an axiomatic system;		X
5.2k the role of logical reasoning in mathematics and age-appropriate methods and uses of informal and formal reasoning;	X	X
5.3k the process of identifying, posing, exploring, and solving mathematical problems in age-appropriate ways;	X	X
5.4k connections among mathematical concepts, procedures, and equivalent representations;	X	X
5.5k connections between mathematics, daily living, and other disciplines;	X	X
5.6k how to communicate mathematical ideas and concepts in age-appropriate oral, written, and visual forms; and	X	X
5.7k how to use age-appropriate mathematical manipulatives and drawings and a wide range of technological tools to develop and explore mathematical concepts and ideas.	X	X
Application: What Teachers Can Do		
5.1s apply correct mathematical reasoning to derive valid conclusions from a set of premises;	X	X
5.2s apply principles of inductive reasoning to make conjectures and use deductive methods to evaluate the validity of conjectures;	X	X
5.3s use formal and informal reasoning to explore, investigate, and justify mathematical ideas;	X	X
5.4s recognize examples of fallacious reasoning;	X	X
5.5s evaluate mathematical arguments and proofs;	X	X

Standard V: Mathematical Processes: The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.	**ELE 521**	**PACT**
5.6s provide convincing arguments or proofs for mathematical theorems	X	X
5.7s recognize that a mathematical problem can be solved in a variety of ways, evaluate the appropriateness of various strategies, and select an appropriate strategy for a given problem;	X	X
5.8s evaluate the reasonableness of a solution to a given problem;	X	X
5.9s use physical and numerical models to represent a given problem or mathematical procedure;	X	X
5.10s recognize that assumptions are made when solving problems and identify and evaluate those assumptions;	X	X
5.11s investigate and explore problems that have multiple solutions;	X	X
5.12s apply content knowledge to develop a mathematical model of a real-world situation and analyze and evaluate how well the model represents the situation;	X	X
5.13s develop and use simulations as a tool to model and solve problems; and	X	X
5.14s develop and use iteration and recursion to model and solve problems.	X	X
5.15s explore problems using verbal, graphical, numerical, physical, and algebraic representations;	X	X
5.16s recognize and use multiple representations of a mathematical concept (e.g., a point and its coordinates, the area of a circle as a quadratic function in *r*, probability as a ratio of two areas);	X	X

Standard V: Mathematical Processes: The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.	**ELE 521**	**PACT**
5.17s apply mathematical methods to analyze practical situations; and	X	X
5.18s use mathematics to model and solve problems in other disciplines, such as art, music, science, social science, and business.	X	X
5.19s facilitate discourse between the teacher and students and among students to explore, build, and refine mathematical ideas;	X	X
5.20s use questioning strategies to identify, support, monitor, and challenge students' mathematical thinking;	X	X
5.21s translate mathematical statements among developmentally appropriate language, standard English, mathematical language, and symbolic mathematics;	X	X
5.22s provide students with opportunities to demonstrate their understanding of mathematics in a variety of ways using a variety of tools;	X	X
5.23s use visual media such as graphs, tables, diagrams, and animations to communicate mathematical information; and	X	X
5.24s use the language of mathematics as a precise means of expressing mathematical ideas.	X	X

Standard VI: Mathematical Perspectives: The mathematics teacher understands the historical development of mathematical ideas, the interrelationship between society and mathematics, the structure of mathematics, and the evolving nature of mathematics and mathematical knowledge.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
6.1k the history and evolution of mathematical concepts, procedures, and ideas;		X
6.2k the contributions that different cultures have made to the field of mathematics and the impact mathematics has on society and culture;		X
6.3k the role society plays in shaping personal views and perspectives of mathematics;		X
6.4k the impact of technological advances on mathematical knowledge and skills and of mathematics on technology;		X
6.5k how mathematics is used in a variety of careers and professions;		X
6.6k the structural properties common to the mathematical disciplines;		X
6.7k the implications of current trends and research in mathematics and mathematics education.	X	X
Application: What Teachers Can Do		
6.1s use key events and knowledge of specific individuals throughout the history of mathematics to illustrate age-appropriate mathematical concepts;	X	X
6.2s design age-appropriate activities that emphasize mathematical contributions from various cultures;	X	X
6.3s use the historical developments of mathematical ideas to illustrate how mathematics progresses from concrete applications to abstract generalizations;	X	X
6.4s use historic mathematical problems as a tool for assessing the mathematical knowledge of a particular period or culture;	X	X

Standard VI: Mathematical Perspectives: The mathematics teacher understands the historical development of mathematical ideas, the interrelationship between society and mathematics, the structure of mathematics, and the evolving nature of mathematics and mathematical knowledge.	**ELE 521**	**PACT**
6.5s select age-appropriate activities that relate to the linguistic, cultural, and socioeconomic background of students;	X	X
6.6s plan age-appropriate instruction that emphasizes the role of mathematics in the workplace and demonstrate how mathematics is used in a variety of careers; and	X	X
6.7s analyze the structure of mathematical systems and use the structural properties of mathematical systems to make age-appropriate connections among mathematical concepts	X	X

Standard VII: Mathematical Learning and Instruction: The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction to meet curriculum goals; and to teach all students to understand and use mathematics.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
7.1k current theories, research, and practice on how students learn mathematics;	X	X
7.2k how students differ in their approaches to learning with regards to linguistic, cultural, socioeconomic, and developmental diversity;	X	X
7.3k strategies, techniques, and procedures for helping students understand mathematics;	X	X
7.4k how students' prior knowledge of and attitudes towards mathematics may affect their learning;	X	X
7.5k the process by which students construct mathematical knowledge	X	X
7.6k common mathematical misconceptions and errors;	X	X
7.7k how learning may be assisted through the use of mathematics manipulatives, drawings, and technological tools;	X	X
7.8k how individual and group instruction can promote learning and create a learning environment that actively engages students in learning and encourages self-motivation;	X	X
7.9k a variety of instructional methods, tools, and tasks that promote students' confidence, curiosity, and inventiveness while using mathematics described in the TEKS;	X	X
7.10k planning strategies for developing mathematical instruction as a discipline of interconnected concepts and procedures;	X	X

Standard VII: Mathematical Learning and Instruction: The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction to meet curriculum goals; and to teach all students to understand and use mathematics.	**ELE 521**	**PACT**
7.11k procedures for selecting, developing, and implementing worthwhile mathematical tasks that meet the diverse needs of the student population and require students to reason, make connections, solve problems, and communicate mathematically;	X	X
7.12k procedures for developing instruction that connects concrete, symbolic, and abstract representations of mathematical knowledge;	X	X
7.13k methods for locating, selecting, developing, and evaluating learning opportunities that emphasize the connections between mathematics and real world phenomena;	X	X
7.14k how technological tools and manipulatives can be used appropriately to assist students in developing, comprehending, and applying mathematical concepts and skills;	X	X
7.15k procedures for creating a variety of mathematical exploratory activities;	X	X
7.16k how to relate mathematics to students' lives and daily living;	X	X
7.17k strategies that students with diverse strengths and needs can use to determine word meaning in content-related texts;	X	X
7.18k strategies that students with diverse strengths and needs can use to develop content-area vocabulary; and	X	X
7.19k strategies that students with diverse strengths and needs can use to facilitate comprehension before, during, and after reading content-related texts.	X	X

Standard VII: Mathematical Learning and Instruction: The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction to meet curriculum goals; and to teach all students to understand and use mathematics.	**ELE 521**	**PACT**
Application: What Teachers Can Do		
7.1s apply theories and principles of learning mathematics to plan appropriate instructional activities for all students;	X	X
7.2s use students' prior mathematical knowledge to build conceptual links to new knowledge;	X	X
7.3s employ instructional strategies that build on the linguistic, cultural, and socioeconomic diversity of students;	X	X
7.4s develop a variety of instructional activities to guide students in constructing mathematical knowledge;	X	X
7.5s teach students to recognize and correct common mathematical misconceptions and errors;	X	X
7.6s engage students in tasks that require students to communicate their mathematical reasoning;	X	X
7.7s motivate students and actively engage them in the learning process by using a variety of interesting, challenging, and worthwhile mathematical tasks in individual, small-, and large-group settings;	X	X
7.8s use a variety of tools, including, but not limited to, rulers, protractors, scales, stopwatches, measuring containers, money, calculators, and software, to strengthen comprehension and understanding;	X	X
7.9s provide instruction along a continuum from concrete to abstract and plan instruction that builds on strengths and addresses needs;	X	X
7.10s model appropriate mathematical problem-solving techniques, reasoning, discourse, and enthusiasm for mathematics as an example to help students develop positive attitudes towards mathematics;	X	X

Standard VII: Mathematical Learning and Instruction: The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction to meet curriculum goals; and to teach all students to understand and use mathematics.	**ELE 521**	**PACT**
7.11s develop clear learning goals to plan, deliver, assess, and reevaluate instruction based upon the TEKS;	X	X
7.12s select and create worthwhile mathematical tasks based on the TEKS that actively engage students in the learning process;	X	X
7.13s provide students with opportunities to develop and improve mathematical skills and procedures;	X	X
7.14s use a variety of instructional delivery methods, such as individual, structured, small-group, and large-group formats;	X	X
7.15s use a variety of questioning strategies to encourage mathematical discourse and to help students analyze and evaluate their mathematical thinking;	X	X
7.16s create strategies for integrating writing as appropriate in the mathematics class;	X	X
7.17s use challenging tasks that make connections between mathematics, the real world, and other disciplines to motivate learning;	X	X
7.18s use mathematics labs, simulations, open-ended investigations, research projects, and other activities when appropriate to guide students' learning;	X	X
7.19s apply appropriate technology to promote mathematical learning;	X	X
7.20s use appropriate mathematical manipulatives to promote abstract understanding;	X	X
7.21s select and use mathematical activities that relate to students' lives and communities;	X	X
7.22s use a variety of instructional strategies to ensure all students' reading comprehension of content-related texts, including helping students link the content of texts to their lives and connect related ideas across different texts;	X	X

Standard VII: Mathematical Learning and Instruction: The mathematics teacher understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction to meet curriculum goals; and to teach all students to understand and use mathematics.	**ELE 521**	**PACT**
7.23s teach students how to locate, retrieve, and retain content-related information from a range of texts and technologies; and	X	X
7.24s teach students how to locate the meanings and pronunciations of unfamiliar content-related words using appropriate sources, such as dictionaries, thesauruses, and glossaries.	X	X

Standard VIII: Mathematical Assessment: The mathematics teacher understands assessment and uses a variety of formal and informal assessment techniques appropriate t the learner on an ongoing basis to monitor and guide instruction and to evaluate and report student progress.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
8.1k the purpose, characteristics, and uses of various assessments in mathematics, including formative and summative assessments;	X	X
8.2k the importance of carefully selecting or designing formative and summative assessments for the specific decisions they are intended to inform;	X	X
8.3k how to select and administer appropriate assessment instruments that evaluate students' knowledge of and ability to use mathematics;	X	X
8.4k appropriate procedures for sharing assessment information with students, parents, and school personnel;		X
8.5k how to select and develop assessment methods that are consistent with what is taught and how it is taught;	X	X
8.6k how to evaluate a variety of assessment methods and materials for reliability validity, absence of bias, clarity of language, and appropriateness of mathematical level;	X	X
8.7k the reciprocal nature of assessment and instruction and how to evaluate assessment results to design, monitor, and modify instruction to improve mathematical learning; and	X	X
8.8k how to diagnose and correct common mathematical misconceptions and errors.	X	X
Application: What Teachers Can Do		
8.1s select or design and administer a variety of appropriate assessment instruments and/or methods (e.g., formal/informal, formative/summative) to monitor student understanding of mathematics and progress over time;	X	X

Standard VIII: Mathematical Assessment: The mathematics teacher understands assessment and uses a variety of formal and informal assessment techniques appropriate t the learner on an ongoing basis to monitor and guide instruction and to evaluate and report student progress.	**ELE 521**	**PACT**
8.2s develop a variety of formal and informal assessments and scoring procedures that consist of worthwhile tasks that assess mathematical understanding, common misconceptions, and error patterns;	X	X
8.3s align assessment methods with what is taught and how it is taught;	X	X
8.4s interpret the results of formal and informal assessments and use results to evaluate and modify instructional approaches;	X	X
8.5s establish criteria consistent with ethical and legal principles regarding the sharing of assessment results with students, parents, and appropriate school personnel;	X	X
8.6s develop a valid student grading system based on the results of students' assessments; and	X	X
8.7s communicate assessment results to students' parentsXcaregivers and other appropriate personnel	X	X

Standard IX Professional Development: The mathematics teacher understands mathematics teaching as a profession, knows the value and rewards of being a reflective practitioner, and realizes the importance of making a lifelong commitment to professional growth and development.	**ELE 521**	**PACT**
Teacher Knowledge: What Teachers Know		
9.1k the importance of establishing collegial relationships with other teachers and professional staff;		X
9.2k the advantages of participating in workshops, courses, conferences, and other professional activities that address topics related to the teaching of mathematics, including the use of technology;		X
9.3k the value of joining and actively participating in the professional community of mathematics educators;		X
9.4k the advantages of discussing with colleagues current ideas, trends, and directions in mathematics and mathematics education through local organizations, professional publications, and electronic communities;		X
9.5k the importance of participating in school, community, and political efforts to effect positive change in mathematics education;		X
9.6k national and statewide curriculum in mathematics curriculum development, instruction, and assessment; and		X
9.7k the availability of state resources to support teachers of mathematics.		X
Application: What Teachers Can Do		
9.1s communicate with colleagues to create professional interactions across all disciplines at the building and district level;	X	X

Standard IX Professional Development: The mathematics teacher understands mathematics teaching as a profession, knows the value and rewards of being a reflective practitioner, and realizes the importance of making a lifelong commitment to professional growth and development.	**ELE 521**	**PACT**
9.2s exchange information with mathematics teachers at lower and higher grade levels to ensure continuity in students' mathematics education;	X	X
9.3s use professional relationships to gather information for creating links between the mathematics curriculum and other disciplines;	X	X
9.4s use workshops and professional development activities as an opportunity to keep up with current technology, obtain new instructional materials and ideas, discover new approaches for delivering mathematical lessons, and continue to learn new mathematics;	X	X
9.5s select materials from appropriate publications produced by professional mathematics organizations to develop lesson plans, instructional activities, and assessments;	X	X
9.6s use local organizations and electronic communities as a forum for exchanging, discussing, and evaluating ideas regarding mathematics and mathematical instruction, and as an opportunity for professional self assessment; and	X	X
9.7s organize and participate in a variety of methods (e.g., newsletters, Web pages, fundraisers, math nights, volunteer programs, field trips) to promote communication among parents, students, and the community	X	X

Standards Correlation Chart for the Core Subjects 4/8 Certificate (SOCIAL STUDIES)
Content Mastery

Please indicate where in the curriculum your program addresses the relevant 4X8 standards; TAC§228.30 (a)

Standard I: The social studies teacher has a comprehensive knowledge of the social sciences and recognizes the value of the social sciences.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
1.1k the philosophical foundations of the social science disciplines;	X	X
1.2k how knowledge generated by the social science disciplines affects society and people's lives;	X	X
1.3k practical applications of social studies education;	X	X
1.4k social science research and how social scientists collect, analyze, and report knowledge and data; and	X	X
1.5k contemporary issues, events, and individuals in the community, state, nation, and world.	X	X
Application: What Teachers Can Do		
1.1s relate philosophical assumptions and ideas to issues and trends in the social sciences;	X	X
1.2s use social science information and ideas to study social phenomena;	X	X
1.3s communicate the value of social studies education to a variety of audiences (e.g., students, parents/caregivers, teachers, community);	X	X
1.4s formulate research questions and use appropriate procedures to reach supportable judgments and conclusions in the social sciences;	X	X
1.5s locate, gather, and organize primary and secondary information using social science resources and standard research methodologies, and evaluate the reliability of this information;	X	X
1.6s promote students' use of social science skills and research tools, including technological tools; and	X	X
1.7s use social studies terminology correctly.	X	X

Standard II: The social studies teacher effectively integrates the various social science disciplines	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
2.1k how social science disciplines relate to each other;	X	X
2.2k how social science disciplines relate to other content areas;	X	X
2.3k the vertical alignment of the social sciences in the Texas Essential Knowledge and Skills (TEKS) from grade level to grade level, including prerequisite knowledge and skills.	X	X
Application: What Teachers Can Do		
2.1s relate skills, concepts, and ideas in different social science disciplines;	X	X
2.2s make connections between knowledge and methods in the social sciences and in other content areas	X	X

Standard III: The social studies teacher uses knowledge and skills of social studies, as defined by the TEKS to plan and implement effective curriculum, instruction, assessment, and evaluation.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
3.1k stages and characteristics of child growth and development and their implications for designing and implementing effective learning experiences in the social sciences;	X	X
3.2k forms of assessment appropriate for evaluating students' progress and needs in the social sciences;	X	X
3.3k the specific state content and performance standards that comprise all areas of social studies (i.e., history; geography; economics; government; citizenship; culture; science, technology, and society), as defined by the Texas Essential Knowledge and Skills (TEKS);	X	X
3.4k strategies that students with diverse strengths and needs can use to determine word meaning in content-related texts;	X	X
3.5k strategies that students with diverse strengths and needs can use to develop content-area vocabulary;	X	X
3.6k strategies that students with diverse strengths and needs can use to facilitate comprehension before, during, and after reading content-related texts;	X	X
3.7k how to use assessment to help determine when a student needs additional help or intervention to bring the student's performance to grade level; and	X	X
3.8k the appropriate use of electronic technology as a tool for learning and communicating social studies concepts.	X	X

Standard III: The social studies teacher uses knowledge and skills of social studies, as defined by the TEKS to plan and implement effective curriculum, instruction, assessment, and evaluation.	ELE 523	PACT
Application: What Teachers Can Do		
3.1s select and use developmentally appropriate instructional practices, strategies, activities, technologies, and materials to promote student knowledge, skills, and progress in the social sciences;	X	X
3.2s plan and implement developmentally appropriate learning experiences in the social sciences;	X	X
3.3s use a variety of instructional strategies to ensure all students' reading comprehension of content-related texts, including helping students link the content of texts to their lives and connect related ideas across different texts;	X	X
3.4s teach students how to locate, retrieve, and retain content-related information from a range of texts and technologies;	X	X
3.5s teach students how to locate the meanings and pronunciations of unfamiliar content-related words using appropriate sources, such as dictionaries, thesauruses, and glossaries;	X	X
3.6s use multiple forms of assessment and knowledge of the TEKS to help determine students' progress and needs and to help plan instruction; and	X	X
3.7s keep abreast of and apply current research, trends, and practices in the social sciences and social studies education (e.g., read professional journals, join professional organizations, participate in study groups, attend professional conferences)	X	X

Standard IV: History: The social studies teacher applies knowledge of significant historical events and developments, as well as multiple historical interpretations and ideas, to facilitate student understanding of relationships between the past, the present, and the future.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
4.1k traditional historical points of reference in the history of Texas, the United States, and the world;	X	X
4.2k the historical significance of customs, holidays, landmarks, and celebrations in the community, state, and nation;	X	X
4.3k the concept of chronology and how it is used to understand history and historical events;	X	X
4.4k how various sources provide information about the past;	X	X
4.5k the individuals, events, and issues that shaped the history of Texas;	X	X
4.6k the causes and effects of European exploration and colonization of Texas, the United States, and the Western Hemisphere;	X	X
4.7k the similarities and differences of Native-American groups in Texas and the Western Hemisphere before European colonization;		
4.8k common characteristics of communities, past and present;	X	X
4.9k the impact of science and technology on the development of societies;	X	X
4.10k how geographic contexts (the geography of places in the past) and processes of spatial exchange (diffusion) influenced events in the past and helped to shape the present.	X	X

Standard IV: History: The social studies teacher applies knowledge of significant historical events and developments, as well as multiple historical interpretations and ideas, to facilitate student understanding of relationships between the past, the present, and the future.	ELE 523	PACT
4.11k all content specified for teachers in grades EC–4;	X	X
4.12k how characteristics of contemporary world societies have resulted from historical events such as invasion, conquests, colonization, other conflicts, immigration, and trade;	X	X
4.13k how individuals, events, and issues shaped the history of Texas, the United States, and the world;		X
4.14k the foundations of representative government in the United States and the significant political and economic issues of the revolutionary era;		X
4.15k the challenges confronted by the U.S. government and its leaders in the early years of the republic;	X	X
4.16k westward expansion and its effects on the political, economic, and social development of the nation;	X	X
4.17k how political, economic, and social factors led to the growth of sectionalism and the Civil War;	X	X
4.18k individuals, issues, and events of the Civil War and the effects of Reconstruction on the political, economic, and social life of the nation; and	X	X
4.19k important issues, events, and individuals of the 20th century in the United States and the world.	X	X
Application: What Teachers Can Do		
4.1s locate, differentiate between, and use primary and secondary sources such as technology, databases, media and news services, biographies, interviews, and artifacts to acquire historical information;	X	X

Standard IV: History: The social studies teacher applies knowledge of significant historical events and developments, as well as multiple historical interpretations and ideas, to facilitate student understanding of relationships between the past, the present, and the future.	ELE 523	PACT
4.2s analyze and evaluate the validity of information in relation to bias, propaganda, point of view, and frame of reference;	X	X
4.3s analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;	X	X
4.4s use the process of historical inquiry to research, organize, and interpret information from outlines, reports, databases, and visuals including graphs, charts, timelines, and maps;	X	X
4.5s apply different methods of interpreting the past to understand, evaluate, and support multiple points of view, frames of reference, and the historical context of events and issues;	X	X
4.6s use appropriate skills to interpret social studies information such as maps and graphs;	X	X
4.7s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to historical issues;	X	X
4.8s communicate historical information and ideas in written, oral, and visual forms;	X	X
4.9s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X

Standard IV: History: The social studies teacher applies knowledge of significant historical events and developments, as well as multiple historical interpretations and ideas, to facilitate student understanding of relationships between the past, the present, and the future.	ELE 523	PACT
4.10s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions; and	X	X
4.11s relate historical information and ideas to information and ideas in other social sciences and in other disciplines.	X	X
4.12s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standard V: Geography: The social studies teacher applies knowledge of people, places, and environments to facilitate students' understanding of geographic relationships in Texas, the United States, and the world.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
5.1k the concept of region as an area of Earth's surface with unifying geographic characteristics;	X	X
5.2k the locations and characteristics of places and regions in Texas, the United States, and the world;	X	X
5.3k how humans adapt to, use, and modify the physical environment;	X	X
5.4k how physical characteristics of places and regions and human modifications to the environment affect people's activities and settlement patterns;	X	X
5.5k how location (absolute and relative) affects people, places, and environment;	X	X
5.6k the concepts of location, distance, grid systems, and direction on maps and globes;	X	X
5.7k the patterns, processes, and locations of major historical and contemporary societies and regions of Texas, the United States, and the world;	X	X
5.8k physical processes and their effects on patterns in the environment;	X	X
5.9k the characteristics, distribution, and migration of populations in Texas, the United States, and the world; and	X	X
5.10k the physical characteristics of Texas, the United States, and the world, past and present, and how humans adapted to and modified the environment.	X	X
5.11k all content specified for teachers in grades EC–3;	X	X
5.12k how geographic factors influence the economic development, political relationships, and policies of societies; and	X	X
5.13k the impact of interactions between people and the physical environment on the development of places and regions.	X	X

Standard V: Geography: The social studies teacher applies knowledge of people, places, and environments to facilitate students' understanding of geographic relationships in Texas, the United States, and the world.	ELE 523	PACT
Application: What Teachers Can Do	X	X
5.1s communicate geographic information and ideas in written, oral, and visual forms;	X	X
5.2s evaluate multiple points of view and frames of reference relating to geographic phenomena;	X	X
5.3s use geographic tools such as maps, globes, graphs, charts, models, and databases to pose and answer geographic questions	X	X
5.4s use historical, geographic, and statistical information from a variety of sources such as databases, field interviews, media services, and questionnaires to answer geographic questions and infer geographic relationships;	X	X
5.5s analyze and evaluate the validity and utility of multiple sources of geographic information such as primary and secondary sources, aerial photographs, and maps;	X	X
5.6s construct and interpret maps to answer geographic questions, infer geographic relationships, and analyze geographic change;	X	X
5.7s apply basic mathematical and statistical concepts and analytical methods to analyze geographic data using appropriate technology;	X	X
5.8s use a series of maps, including computer-based geographic information systems, to obtain and analyze data needed to solve geographic and locational problems;	X	X
5.9s design and draw appropriate maps and other graphics such as sketch maps, diagrams, tables, and graphs to present geographic features, geographic distributions, geographic relationships, and other geographic information;	X	X

Standard V: Geography: The social studies teacher applies knowledge of people, places, and environments to facilitate students' understanding of geographic relationships in Texas, the United States, and the world.	ELE 523	PACT
5.10s plan, organize, and complete group research projects that involve asking geographic questions; acquiring, organizing, and analyzing geographic information; answering geographic questions; and communicating results;	X	X
5.11s use case studies and geographic information systems to identify contemporary geography problems and issues and to apply geographic knowledge and skills to answer real-world questions;	X	X
5.12s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X
5.13s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions;	X	X
5.14s relate geographic information and ideas to information and ideas in other social sciences and in other disciplines.	X	X
5.15s apply all skills specified for teachers in grades EC-4, using content and contexts appropriate for grades 4-8	X	X

Standard VI: Economics: The social studies teacher knows how people organize economic systems to produce, distribute, and consume goods and serviced, and uses this knowledge to enable students to understand economic systems and make informed economic decisions.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
6.1k that basic human needs are met in many ways;	X	X
6.2k basic economic concepts, including goods and services, free enterprise, interdependence, needs and wants, scarcity, and the concept of an economic system;	X	X
6.3k the value and importance of work and how work and jobs relate to spending and saving money and meeting people's needs;	X	X
6.4k the roles of producers and consumers in the production of goods and services;	X	X
6.5k the purposes of spending and saving money;	X	X
6.6k how businesses operate in the U.S. free enterprise system;	X	X
6.7k the basic economic patterns of early societies in Texas, the United States, and the Western Hemisphere;	X	X
6.8k the characteristics, benefits, and development of the free enterprise system in Texas and the United States;	X	X
6.9k patterns of work and economic activities in Texas and the United States and the means used to measure a society's economic level; and	X	X
6.10k the interdependence of the Texas economy with the United States and the world.	X	X
6.11k all content specified for teachers in grades EC–4;	X	X
6.12k economic reasons for exploration and colonization;	X	X
6.13k the impact of supply and demand on consumers and producers in a free enterprise system;	X	X
6.14k various ways in which people organize economic systems;	X	X

Standard VI: Economics: The social studies teacher knows how people organize economic systems to produce, distribute, and consume goods and serviced, and uses this knowledge to enable students to understand economic systems and make informed economic decisions.	**ELE 523**	**PACT**
6.15k significant economic events and issues and their effects in Texas, the United States, and the world;	X	X
6.16k similarities and differences among worldwide economic systems;	X	X
6.17k the role that factors of production play in a society's economy;	X	X
6.18k categories of economic activities and the means used to measure a society's economic level;	X	X
6.19k the factors that caused societies to change from agrarian to urban societies;	X	X
6.20k why various sections of the United States developed different patterns of economic activity;	X	X
6.21k how various economic forces resulted in the Industrial Revolution in the 18th and 19th centuries;	X	X
6.22k the processes of economic development;	X	X
6.23k the characteristics, benefits, and development of the free enterprise system in the United States; and	X	X
6.24k patterns of work and economic activities in the United States and the means used to measure a society's economic level.	X	X
Application: What Teachers Can Do		
6.1s apply higher-order thinking skills to locate, analyze, evaluate, interpret, organize, and use economic information acquired from a variety of primary and secondary sources, including electronic technology;	X	X
6.2s understand and evaluate multiple points of view and frames of reference relating to economic content and issues;	X	X

Standard VI: Economics: The social studies teacher knows how people organize economic systems to produce, distribute, and consume goods and serviced, and uses this knowledge to enable students to understand economic systems and make informed economic decisions.	**ELE 523**	**PACT**
6.3s analyze and evaluate the validity of information from primary and secondary sources for bias, propaganda, point of view, and frame of reference;	X	X
6.4s use various economic indicators to describe and measure levels of economic activity;	X	X
6.5s analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;	X	X
6.6s create products (e.g., create a graph, make a video, deliver an oral presentation) to illustrate contemporary economic topics;	X	X
6.7s evaluate economic-activity patterns using charts, tables, graphs, and maps;	X	X
6.8s use appropriate mathematical and statistical skills to interpret economic information;	X	X
6.9s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to economic issues;	X	X
6.10s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X

Standard VI: Economics: The social studies teacher knows how people organize economic systems to produce, distribute, and consume goods and serviced, and uses this knowledge to enable students to understand economic systems and make informed economic decisions.	**ELE 523**	**PACT**
6.11s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions; and	X	X
6.12s relate economic information and ideas to information and ideas in other social sciences and in other disciplines.	X	X
6.13s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standard VII: Government: The Social Studies teacher knows how governments and structures of power function, provide order, and allocate resources and uses this knowledge to facilitate student understanding of how individuals and groups achieve their goals through political systems.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
7.1k the purpose of rules and laws; the relationship between rules, rights, and responsibilities; and the individual's role in making and enforcing rules and ensuring the welfare of society;	X	X
7.2k the roles of authority figures and public officials;	X	X
7.3k the basic structure and functions of local, state, and national governments and their relationships to each other;	X	X
7.4k key principles and ideas of the U.S. and Texas Declarations of Independence, Constitutions, and other significant political documents;	X	X
7.5k relationships among significant political documents; and	X	X
7.6k how people organized governments during the early development of Texas and the United States.	X	X
7.7k all content specified for teachers in grades EC–4;	X	X
7.8k the structures and functions of the Texas government and the U.S. government;	X	X
7.9k the political process in the United States and Texas and how the U.S. political system works;	X	X
7.10k characteristics of limited governments, such as constitutional and democratic governments, and unlimited governments, such as totalitarian and nondemocratic governments;	X	X

Standard VII: Government: The Social Studies teacher knows how governments and structures of power function, provide order, and allocate resources and uses this knowledge to facilitate student understanding of how individuals and groups achieve their goals through political systems.	ELE 523	PACT
7.11k alternative ways of organizing governments and the effectiveness of different types of government in meeting citizens' needs;	X	X
7.12k the formal and informal process of changing the U.S. and Texas Constitutions and the impact of changes on society;	X	X
7.13k the nature of the relationships between local, state, and national governments in a federal system;	X	X
7.14k the impact of landmark Supreme Court cases; and	X	X
7.15k how people organized governments in colonial America.	X	X
Application: What Teachers Can Do		
7.1s apply higher-order thinking skills to locate, analyze, evaluate, interpret, organize, and use information about government acquired from a variety of primary and secondary sources, including electronic technology;	X	X
7.2s understand and evaluate multiple points of view and frames of reference relating to issues in government;	X	X
7.3s analyze and evaluate the validity of information from primary and secondary sources for bias, propaganda, point of view, and frame of reference;	X	X
7.4s analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;	X	X

Standard VII: Government: The Social Studies teacher knows how governments and structures of power function, provide order, and allocate resources and uses this knowledge to facilitate student understanding of how individuals and groups achieve their goals through political systems.	ELE 523	PACT
7.5s create products (e.g., create a graph, make a video, deliver an oral presentation) to illustrate contemporary government topics;	X	X
7.6s evaluate government data using charts, tables, graphs, and maps;	X	X
7.7s use appropriate skills to interpret social studies information such as maps and graphs;	X	X
7.8s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to government issues;	X	X
7.9s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X
7.10s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions; and	X	X
7.11s relate information and ideas in government to information and ideas in other social sciences and in other disciplines.	X	X
7.12s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standard VIII: Citizenship: The social studies teacher understands citizenship in the United States and other societies, and uses this knowledge to prepare students to participate in our society through an understanding of democratic principles and citizenship practices.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
8.1k important customs, symbols, and celebrations that represent American beliefs and principles and that contribute to national unity;	X	X
8.2k characteristics of good citizenship in the United States and other societies as exemplified by historic figures and ordinary people;	X	X
8.3k the impact of individual and group decisions on communities in a democratic society;	X	X
8.4k the fundamental rights of American citizens guaranteed in the Bill of Rights and other amendments to the U.S. Constitution;	X	X
8.5k the importance of the expression of different points of view in a democratic society;	X	X
8.6k the importance of voluntary individual participation in the democratic process; and	X	X
8.7k the importance of effective leadership in a democratic society.	X	X
8.8k all content specified for teachers in grades EC–3;	X	X
8.9k the relationship among individual rights, responsibilities, and freedoms in democratic societies;	X	X
8.10k that the nature, rights, and responsibilities of citizenship varies among societies; and	X	X
8.11k the rights and responsibilities of citizens in Texas and the United States, past and present.	X	X

Standard VIII: Citizenship: The social studies teacher understands citizenship in the United States and other societies, and uses this knowledge to prepare students to participate in our society through an understanding of democratic principles and citizenship practices.	ELE 523	PACT
Application: What Teachers Can Do		
8.1s apply higher-order thinking skills to locate, analyze, evaluate, interpret, organize, and use information relating to citizenship issues acquired from a variety of primary and secondary sources, including electronic technology;	X	X
8.2s understand and evaluate multiple points of view and frames of reference relating to citizenship issues;	X	X
8.3s model and promote acceptance of various points of view;	X	X
8.4s promote student participation in student government and in school and community activities;	X	X
8.5s analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;	X	X
8.6s create products (e.g., create a graph, make a video, deliver an oral presentation) to illustrate contemporary citizenship topics;	X	X
8.7s analyze and evaluate the validity of information from primary and secondary sources for bias, propaganda, point of view, and frame of reference;	X	X
8.8s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to citizenship issues;	X	X

Standard VIII: Citizenship: The social studies teacher understands citizenship in the United States and other societies, and uses this knowledge to prepare students to participate in our society through an understanding of democratic principles and citizenship practices.	ELE 523	PACT
8.9s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X
8.10s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions;	X	X
8.11s apply skills for conflict resolution, including persuasion, compromise, debate, and negotiation; and	X	X
8.12s relate information and ideas about citizenship issues to information and ideas in various social sciences and in other disciplines.	X	X
8.13s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standard IX: Culture: The social studies teacher understands cultures and how they develop and adapt, and uses this knowledge to enable students to appreciate and respect cultural diversity in Texas, the United States, and the world.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
9.1k similarities and differences among the ways various peoples at different times in history have lived and met basic human needs;	X	X
9.2k the development and use of various customs, traditions, and beliefs within families and cultures;	X	X
9.3k the role of families in meeting basic human needs;	X	X
9.4k the significance of works of art in the local community;	X	X
9.5k how people use oral tradition, stories, music, paintings, and sculpture to create and represent culture;	X	X
9.6k ethnic and cultural celebrations of Texas and the United States and other nations;	X	X
9.7k the role of real and mythical heroes in shaping the culture of communities, the state, and the nation;	X	X
9.8k the importance of writers and artists to the cultural heritage of communities;	X	X
9.9k the concept of culture and the processes of cultural diffusion and exchange;	X	X
9.10k the contributions of people of various racial, ethnic, and religious groups to Texas, the United States, and the world;	X	X
9.11k the effects of race, gender, and socioeconomic class on ways of life in the United States and throughout the world; and	X	X
9.12k the various roles of men, women, children, and families in cultures past and present.	X	X

Standard IX: Culture: The social studies teacher understands cultures and how they develop and adapt, and uses this knowledge to enable students to appreciate and respect cultural diversity in Texas, the United States, and the world.	ELE 523	PACT
9.13k all content specified for teachers in grades EC–3;	X	X
9.14k the relationship between the arts and the times during which works of art were created;	X	X
9.15k the similarities, differences, and relationships within and among cultures in different societies;	X	X
9.16k that certain institutions are basic to all societies, but characteristics of these institutions may vary from one society to another;	X	X
9.17k relationships that exist among world cultures;	X	X
9.18k the relationship that exists between artistic, creative, and literary expressions and the societies that produce them;	X	X
9.19k the relationships among religion, philosophy, and culture;	X	X
9.20k the concept of diversity within unity;	X	X
9.21k the relationships between and among people from various groups, including racial, ethnic, and religious groups, in the United States and throughout the world;	X	X
9.22k major U.S. reform movements of the 19th century;	X	X
9.23k the impact of religion on the way of life in the United States and throughout the world;	X	X
9.24k how the self develops and the consequences of that development; and	X	X
9.25k the dynamic relationship between self and one's social context.	X	X

Standard IX: Culture: The social studies teacher understands cultures and how they develop and adapt, and uses this knowledge to enable students to appreciate and respect cultural diversity in Texas, the United States, and the world.	ELE 523	PACT
Application: What Teachers Can Do		
9.1s apply higher-order thinking skills to locate, analyze, evaluate, interpret, organize, and use information relating to culture acquired from a variety of primary and secondary sources, including electronic technology;	X	X
9.2s understand and evaluate multiple points of view and frames of reference relating to cultural issues;	X	X
9.3s model and promote acceptance of various points of view;	X	X
9.4s encourage student respect for cultural diversity;	X	X
9.5s analyze information by sequencing, categorizing, and identifying cause-and effect relationships; comparing, contrasting, and finding the main idea; summarizing and making generalizations and predictions; and drawing inferences and conclusions;	X	X
9.6s create products (e.g., create a graph, make a video, deliver an oral presentation) to illustrate contemporary cultural topics;	X	X
9.7s analyze and evaluate the validity of information from primary and secondary sources for bias, propaganda, point of view, and frame of reference;	X	X
9.8s evaluate cultural data using charts, tables, graphs, and maps;	X	X
9.9s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to cultural issues;	X	X

Standard IX: Culture: The social studies teacher understands cultures and how they develop and adapt, and uses this knowledge to enable students to appreciate and respect cultural diversity in Texas, the United States, and the world.	ELE 523	PACT
9.10s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X
9.11s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions; and	X	X
9.12s relate information and ideas about culture to information and ideas in various social sciences and in other disciplines.	X	X
9.13s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standard X: Science, Technology, and Society: The social studies teacher understands developments in science and technology, and uses this knowledge to facilitate student understanding of the social and environmental consequences of scientific discovery and technological innovation.	ELE 523	PACT
Teacher Knowledge: What Teachers Know		
10.1k ways science and technology are used in the home, school, and community;	X	X
10.2k the impact of scientific discoveries and technological innovations on political, economic, social, and environmental developments and on daily life in Texas, the United States, and the world;	X	X
10.3k the origins, diffusion, and effects of major scientific, mathematical, and technological discoveries throughout history; and	X	X
10.4k the relationship of changes in technology to personal growth and development.	X	X
10.5k all content specified for teachers in grades EC–3;	X	X
10.6k the relationships among science and technology, and political, economic, social, and cultural issues and events;	X	X
10.7k connections between major developments in science and technology and the growth of economies and societies;	X	X
10.8k the impact of technology and human modifications on the physical environment;	X	X
10.9k how technology affects definitions of, access to, and use of physical and human resources; and	X	X
10.10k the economic effects of scientific discoveries and technological innovations on households, businesses, and government.	X	X

Standard X: Science, Technology, and Society: The social studies teacher understands developments in science and technology, and uses this knowledge to facilitate student understanding of the social and environmental consequences of scientific discovery and technological innovation.	**ELE 523**	**PACT**
Application: What Teachers Can Do		
10.1s apply higher-order thinking skills to locate, analyze, evaluate, interpret, organize, and use information relating to science, technology, and society acquired from a variety of primary and secondary sources, including electronic technology;	X	X
10.2s understand and evaluate multiple points of view and frames of reference relating to issues involving science, technology, and society;	X	X
10.3s analyze and evaluate the validity of information from primary and secondary sources for bias, propaganda, point of view, and frame of reference;	X	X
10.4s analyze information by sequencing, categorizing, and identifying cause-and effect relationships; comparing, contrasting, and finding the main idea; summarizing and making generalizations and predictions; and drawing inferences and conclusions;	X	X
10.5s use critical methods of inquiry to create products (e.g., create a graph, make a video, deliver an oral presentation) to illustrate contemporary topics related to science, technology, and society;	X	X
10.6s use appropriate mathematical skills to interpret information about issues related to science, technology, and society;	X	X

Standard X: Science, Technology, and Society: The social studies teacher understands developments in science and technology, and uses this knowledge to facilitate student understanding of the social and environmental consequences of scientific discovery and technological innovation.	**ELE 523**	**PACT**
10.7s translate information from one medium to another, including written to visual and statistical to written or visual, using technology as appropriate, to create written, oral, and visual presentations of information related to science, technology, and society issues;	X	X
10.8s use problem-solving processes to identify problems, gather information, list and consider options, consider advantages and disadvantages, choose and implement solutions, and evaluate the effectiveness of solutions;	X	X
10.9s use decision-making processes to identify situations that require decisions, gather information, identify options, predict consequences, and take action to implement decisions; and	X	X
10.10s relate information and ideas about science, technology, and society to information and ideas in various social sciences and in other disciplines.	X	X
10.11s apply all skills specified for teachers in grades EC–3, using content and contexts appropriate for grades 4–8.	X	X

Standards Correlation Chart for the Core Subjects 4/8 Certificate (SCIENCE)
Content Mastery

Please indicate where in the curriculum your program addresses the relevant 4/8 standards; TAC§228.30 (a)

Standard I: The science teacher manages classroom, field, and laboratory activities to ensure the safety of all students and the ethical care and treatment of organisms and specimens.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
1.1k safety regulations and guidelines for science facilities;		X
1.2k safety regulations and guidelines for science instruction;		X
1.3k procedures for the appropriate storage, handling, use, disposal, care, and maintenance of chemicals, materials, specimens, and equipment;		X
1.4k sources of information about laboratory safety;		X
1.5k procedures for the safe handling and ethical care and treatment of organisms and specimens;		X
1.6k procedures for responding to an accident in the laboratory, including first aid;		X
1.7k legal issues associated with accidents and injuries that occur in the classroom, field, or laboratory;		X
1.8k potential safety hazards in the field (e.g., insect bites, poisonous plants); and		X
1.9k the importance of providing laboratory space and equipment for all students, Including those with special needs.		X
Application: What Teachers Can Do		
1.1s employ safe practices in designing, planning, and implementing all instructional activities (e.g., laboratory, field, demonstrations);		X
1.2s determine sufficient space and classroom arrangement for carrying out laboratory activities;	X	X

Standard I: The science teacher manages classroom, field, and laboratory activities to ensure the safety of all students and the ethical care and treatment of organisms and specimens.	ELE 522	PACT
1.3s provide students with continuous instruction and training in safe techniques and procedures for all laboratory and field activities, student demonstrations, and independent projects;	X	X
1.4s read and interpret safety information about chemicals on a Materials Safety Data Sheet (MSDS) and on other chemical labels, including household products;	X	X
1.5s check equipment for safety (e.g., cracks in glassware, proper grounding of electrical equipment) prior to use;	X	X
1.6s create, implement, and enforce rules and safety procedures to promote and maintain a safe learning environment during laboratory and field activities;	X	X
1.7s implement regular procedures to inventory and maintain appropriate safety equipment; and	X	X
1.8s optimize quick and safe access to all safety equipment (e.g., eyewash station, sink, safety shower, fire blanket, and extinguisher)	X	X

Standard II: The science teacher understands the correct use of tools, materials, equipment, and technologies.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
2.1k procedures for the storing, securing, and routine maintenance of scientific equipment used in instructional activities;		X
2.2k correct and safe operating procedures for scientific equipment used in instructional activities;		X
2.3k concepts of precision, accuracy, and error with regard to reading and recording numerical data from a scientific instrument;		X
2.4k the international system of measurement (i.e., metric system);		X
2.5k the use of grade-appropriate equipment and technology for gathering, analyzing, and reporting data; and		X
2.6k the use of technology to acquire, assess, analyze, interpret, and communicate information.		X
Application: What Teachers Can Do		
2.1s select and use appropriate tools, technology, materials, and equipment needed for instructional activities;	X	X
2.2s instruct and monitor students' use of materials, tools, and instruments;	X	X
2.3s make science resources accessible to all students;	X	X
2.4s recycle, reuse, and conserve laboratory resources as appropriate;	X	X
2.5s use the appropriate number of significant figures to record and report numerical data;	X	X
2.6s perform unit conversions within the international system of measurement (i.e., metric system);	X	X
2.7s perform conversions within and across measurement systems;	X	X
2.8s use techniques to calibrate measuring devices as appropriate;	X	X

Standard II: The science teacher understands the correct use of tools, materials, equipment, and technologies.	ELE 522	PACT
2.9s organize, display, and communicate data in a variety of ways (e.g., charts, tables, graphs, diagrams, written reports, oral presentations);	X	X
2.10s gather, organize, display, and communicate data using appropriate technology (e.g., Internet, graphing calculators, spreadsheets); and	X	X
2.11s evaluate the validity of data and data sources.	X	X

Standard III: The science teacher understands the process of scientific inquiry and its role in science instruction.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
3.1k how scientists use different types of investigation, depending on the questions they are trying to answer;		X
3.2k principles and procedures for designing and conducting an inquiry-based scientific investigation;	X	X
3.3k the characteristics of various types of scientific investigations (e.g., descriptive studies, controlled experiments, comparative data analysis);		X
3.4k how current knowledge and theories guide scientific investigations;		X
3.5k the use of technology in scientific research; and		X
3.6k appropriate methods of statistical analysis and measures (e.g., mean, median, mode, correlation).		X
Application: What Teachers Can Do		
3.1s design and conduct inquiry-based scientific investigations, including non-experimental and experimental designs;	X	X

Standard III: The science teacher understands the process of scientific inquiry and its role in science instruction.	ELE 522	PACT
3.2s plan and implement instruction that provides opportunities for all students to engage in scientific inquiry by using various appropriate combinations of the following processes: • ask a scientific question; • formulate a testable hypothesis; • select appropriate equipment and technology for gathering information related to the hypothesis; • make observations and collect data taking accurate and precise measurements; • organize, analyze, and evaluate data to find data trends and patterns and make inferences; and • communicate and defend a valid conclusion about the hypothesis under investigation;	X	X
3.3s link inquiry investigations to students' prior knowledge and experience;	X	X
3.4s focus inquiry-based instruction on questions and issues that are relevant to students;	X	X
3.5s use strategies to assist students in identifying, refining, and focusing scientific ideas and questions guiding an inquiry activity;	X	X
3.6s guide students in making systematic observations and measurements;	X	X
3.7s use a variety of tools and techniques to access, gather, store, retrieve, organize, and analyze data;	X	X
3.8s provide opportunities for students to use higher-order thinking skills, logical reasoning, and scientific problem solving to reach conclusions based on evidence;	X	X

Standard III: The science teacher understands the process of scientific inquiry and its role in science instruction.	ELE 522	PACT
3.9s develop, analyze, and evaluate different explanations for a given scientific result;	X	X
3.10s identify potential sources of error in a given inquiry-based investigation; and	X	X
3.11s develop criteria for assessing student participation in and understanding of the inquiry process.	X	X

Standard IV: The science teacher has theoretical and practical knowledge about teaching science and about how students learn science.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
4.1k theories about how students develop scientific understanding;	X	X
4.2k how the developmental characteristics of students influence science learning;	X	X
4.3k the statewide curriculum as defined in the Texas Essential Knowledge and Skills (TEKS);	X	X
4.4k methods of planning and implementing an inquiry-based science program;	X	X
4.5k how students' prior knowledge and attitudes about science may affect their learning;	X	X
4.6k common student misconceptions in science and effective ways to address these misconceptions;	X	X
4.7k how to establish a collaborative scientific community among students that supports actively engaged learning;	X	X
4.8k the importance of planning activities that are inclusive and accommodate the needs of all students;	X	X
4.9k strategies that students with diverse strengths and needs can use to determine word meaning in content-related texts;		X
4.10k strategies that students with diverse strengths and needs can use to develop content-area vocabulary;		X
4.11k strategies that students with diverse strengths and needs can use to facilitate comprehension before, during, and after reading content-related texts;		X
4.12k the design and management of learning environments that provide the time, space, and resources needed for learning science;	X	X
4.13k the importance of ongoing assessment of student learning and one's own teaching practice in the science classroom; and	X	X
4.14k the teacher's role in the ongoing evaluation and development of science in the total school program.	X	X

Standard IV: The science teacher has theoretical and practical knowledge about teaching science and about how students learn science.	ELE 522	PACT
Application: What Teachers Can Do		
4.1s use lab and field investigations to enable students to develop an understanding of science;	X	X
4.2s sequence learning activities in a way that allows students to build upon their prior knowledge and challenges them to expand their understanding of science;	X	X
4.3s model active learning and inquiry processes for students;	X	X
4.4s encourage students' self-motivation in their own learning;	X	X
4.5s display and model scientific attributes, such as curiosity, openness to new ideas, and skepticism;	X	X
4.6s design and adapt curricula and select content to meet the interests, knowledge, understanding, abilities, experiences, and needs of students;	X	X
4.7s use a variety of instructional strategies to ensure all students' reading comprehension of content-related texts, including helping students link the content of texts to their lives and connect related ideas across different texts;	X	X
4.8s teach students how to locate, retrieve, and retain content-related information from a range of texts and technologies;	X	X
4.9s teach students how to locate the meanings and pronunciations of unfamiliar content-related words using appropriate sources, such as dictionaries, thesauruses, and glossaries;	X	X
4.10s use questioning strategies to move students from concrete to more abstract understanding;	X	X
4.11s respect student diversity and encourage all students to participate fully in science learning;	X	X
4.12s manage time to provide adequate opportunity for all students to participate in investigations;	X	X

Standard IV: The science teacher has theoretical and practical knowledge about teaching science and about how students learn science.	ELE 522	PACT
4.13s create an environment to focus and support student inquiries;	X	X
4.14s use individual, small-group, and whole-class strategies to support student learning;	X	X
4.15s foster collaboration among students; and	X	X
4.16s implement science activities to incorporate school-wide objectives.	X	X

Standard V: The science teacher knows the varied and appropriate assessments and assessment practices to monitor science learning.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
5.1k the relationships among curriculum, assessment, and instruction;	X	X
5.2k characteristics of various assessments, such as reliability, validity, and the absence of bias;	X	X
5.3k the purposes, characteristics, and uses of various types of assessments in science, including formative and summative assessments;	X	X
5.4k the importance of carefully selecting or designing formative and summative assessments for the specific decisions they are intended to inform;	X	X
5.5k the importance of monitoring and assessing students' science understanding and skills on a regular, ongoing basis;	X	X
5.6k ways in which assessment results inform instructional practice;	X	X
5.7k strategies for assessing students' prior knowledge and misconceptions about science;	X	X
5.8k questioning strategies designed to elicit higher-level thinking;	X	X
5.9k the importance of sharing evaluation criteria with students;	X	X
5.10k the role of assessments as learning experiences; and	X	X
5.11k strategies for engaging students in meaningful self-assessment.		X
Application: What Teachers Can Do		
5.1s use formal and informal assessments of science performance and products (e.g., rubrics, portfolios, student profiles, checklists) to evaluate student participation in and understanding of the inquiry process;	X	X

Standard V: The science teacher knows the varied and appropriate assessments and assessment practices to monitor science learning.	ELE 522	PACT
5.2s select or design a variety of appropriate assessment instruments and/or methods (e.g., formal/informal, formative/summative) to monitor student understanding and progress;	X	X
5.3s design assessments that match each learning objective;	X	X
5.4s base decisions regarding instructional content, methods, and practice on information about students' strengths and needs gathered through assessment;	X	X
5.5s select assessment instruments and methods that provide students with adequate opportunities to demonstrate their achievements;	X	X
5.6s evaluate assessment materials and procedures for reliability, validity, absence of bias, and clarity of language;	X	X
5.7s encourage use of self-assessment strategies in science;	X	X
5.8s use a variety of strategies (e.g., pre-testing, reviewing student journals, monitoring discussions, asking questions) to gain insight about students' prior knowledge and misconceptions about science;	X	X
5.9s state evaluation criteria clearly so that students can understand and derive meaning from them; and	X	X
5.10s evaluate the quality of data obtained from an assessment and determine what decisions can appropriately be made based on the data.	X	X

Standard VI: The science teacher understands the history and nature of science.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
6.1k the limitations of the scope of science and the use and limitations of physical, mathematical, and conceptual models to describe and analyze scientific ideas about the natural world;		X
6.2k that science is a human endeavor influenced by societal, cultural, and personal views of the world;		X
6.3k that scientific ideas and explanations must be consistent with observational and experimental evidence;		X
6.4k how logical reasoning is used in the process of developing, evaluating, and validating scientific hypotheses and theories;		X
6.5k the roles that publishing and peer review play in developing and validating scientific knowledge;		X
6.6k principles of scientific ethics in reporting data and in experimenting with living organisms, including human subjects;		X
6.7k that scientific theories have predictive power;		X
6.8k that scientific theories are constantly being modified to conform more closely to new observational and experimental evidence about the natural world;		X
6.9k the historical development of science and the contributions that diverse cultures and individuals of both genders have made to scientific knowledge; and		X
6.10k the relationship between science and technology.		X
Application: What Teachers Can Do		
6.1s provide students with opportunities to examine the types of questions that science can and cannot answer;	X	X
6.2s design and conduct scientific investigations to answer questions;	X	X

Standard VI: The science teacher understands the history and nature of science.	ELE 522	PACT
6.3s analyze, review, and critique the strengths and weaknesses of scientific explanations, hypotheses, and theories using scientific evidence and information;	X	X
6.4s analyze ways in which personal or societal bias can affect the direction, support, and use of scientific research;	X	X
6.5s use key events and knowledge of individuals from throughout the history of science to illustrate scientific concepts;	X	X
6.6s design instruction that accounts for the contributions to science of individuals from a variety of cultures; and	X	X
6.7s use examples from the history of science to demonstrate the changing nature of scientific theories and knowledge	X	X

Standard VII: The science teacher understands how science affects the daily lives of students and how science interacts with and influences personal and societal decisions.	**ELE 522**	**PACT**
Teacher Knowledge: What Teachers Know		
7.1k that human decisions about the use of science and technology are based on factors such as ethical standards, economics, and societal and personal needs;		X
7.2k scientific concepts and principles relating to personal and societal health, including the physiological and psychological effects and risks associated with the use of substances and substance abuse;		X
7.3k concepts related to changes in populations and to characteristics of human population growth;		X
7.4k types and uses of natural resources and the effects of human consumption on the renewal and depletion of resources;		X
7.5k the properties of natural ecosystems and how natural and human processes can influence changes in environments;		X
7.6k the principles of risk and benefit analysis and how it is used in the process of personal and societal decision making;		X
7.7k the role science can play in helping resolve personal, societal, and global challenges		X
Application: What Teachers Can Do		
7.1s use situations from students' daily lives to develop instructional materials that investigate how science can be used to make informed decisions;	X	X
7.2s apply scientific principles and processes to analyze factors that influence personal choices concerning fitness and health;	X	X
7.3s analyze factors that affect the severity of disease and methods for preventing, controlling, or curing diseases and ailments;	X	X

Standard VII: The science teacher understands how science affects the daily lives of students and how science interacts with and influences personal and societal decisions.	**ELE 522**	**PACT**
7.4s analyze how factors such as population growth, resource use, population distribution, overconsumption, technological capacity, poverty, and societal views can influence changes in environments;	X	X
7.5s apply scientific principles and the theory of probability to analyze the advantages, disadvantages, or alternatives to a given decision or course of action; and	X	X
7.6s demonstrate how science can be used to help make informed decisions about societal and global issues	X	X

Standard VIII: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in physical science.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
8.1k properties of objects and materials;		X
8.2k concepts of force and motion;		X
8.3k concepts of heat, light, electricity, and magnetism; and		X
8.4k conservation of energy and energy transformations.		X
8.5k all content specified for teachers in grades EC–4;		X
8.6k the relationship between force and motion;		X
8.7k physical and chemical properties and changes in matter;		X
8.8k energy and energy transformations; and		X
8.9k the conservation of matter and energy.		X
Application: What Teachers Can Do		
8.1s select appropriate techniques, procedures, and tools to observe and record properties of materials (e.g., size, shape, temperature, magnetism, hardness, mass, conduction, density);	X	X
8.2s analyze changes in the position and motion of an object subject to an unbalanced force;	X	X
8.3s apply properties of fundamental forces (e.g., push or pull, friction, gravity, electric force, magnetic force) to analyze common objects (e.g., toys, playground equipment), experiences, and situations;	X	X
8.4s describe and analyze changes in the states of matter caused by the addition or removal of heat energy; and	X	X
8.5s describe the properties of various forms of energy (e.g., mechanical, sound, heat, light) and analyze how energy is transformed from one form to another in a variety of everyday situations	X	X

Standard VIII: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in physical science.	ELE 522	PACT
8.6s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X
8.7s measure, graph, and describe changes in motion and analyze the relationship between force and motion in a variety of situations including simple machines, the flow of blood through the human body, and geologic processes;	X	X
8.8s investigate physical properties of solids, liquids, and gases;	X	X
8.9s analyze physical and chemical changes in matter;	X	X
8.10s apply properties and characteristics of waves to analyze sound, light, and other wave phenomena;	X	X
8.11s interpret the periodic table and chemical formulas and equations;	X	X
8.12s apply the law of conservation of energy to analyze a variety of phenomena (e.g., specific heat, chemical and nuclear reactions, efficiency of simple machines);	X	X
8.13s apply the law of conservation of matter to analyze a variety of phenomena (e.g., water cycle, decomposition); and	X	X
8.14s analyze the transfer of energy in a variety of situations (e.g., the production of heat, light, sound, and magnetic effects by electrical energy; the process of photosynthesis; weather processes).	X	X

Standard IX: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in life science.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
9.1k that living systems have different structures to perform different functions;		X
9.2k that organisms have basic needs;		X
9.3k that organisms respond to internal or external stimuli;		X
9.4k the relationship between organisms and the environment;		X
9.5k the life cycles of organisms; and		X
9.6k how populations or species evolve through time.		X
9.7k all content specified for teachers in grades EC–4;		X
9.8k the structure and function of living systems;		X
9.9k reproduction and the mechanisms of heredity;		X
9.10k adaptations of organisms and the theory of evolution;		X
9.11k regulatory mechanisms and behavior; and		X
9.12k the relationships between organisms and the environment.		X
Application: What Teachers Can Do		
9.1s describe stages in the life cycle of common plants and animals;	X	X
9.2s identify characteristics of plants and animals;	X	X
9.3s identify adaptive characteristics and explain how adaptations influence the survival of populations or species;	X	X
9.4s describe the processes by which plants and animals reproduce and explain how hereditary information is passed from one generation to the next;	X	X

Standard IX: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in life science.	ELE 522	PACT
9.5s analyze the role of internal and external stimuli in the behavior of organisms;	X	X
9.6s compare and contrast inherited traits and learned characteristics;	X	X
9.7s describe ways living organisms depend on each other and their environment for basic needs;	X	X
9.8s analyze the characteristics of habitats within an ecosystem; and	X	X
9.9s identify organisms, populations, or species with similar needs and analyze how they compete with one another for resources	X	X
9.10s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–	X	X
9.11s analyze how structure complements function in cells, organs, organ systems, organisms, and populations;	X	X
9.12s identify human body systems and describe their functions;	X	X
9.13s distinguish between dominant and recessive traits and predict the probable outcomes of genetic combinations;	X	X
9.14s explain that every organism requires a set of instructions for specifying its traits;	X	X
9.15s describe how an inherited trait can be determined by one or by many genes and how more than one trait can be influenced by a single gene;	X	X
9.16s compare and contrast sexual and asexual reproduction;	X	X
9.17s compare traits in a population or species that enhance its survival and reproduction;	X	X

Standard IX: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in life science.	ELE 522	PACT
9.18s describe how populations and species change through time;	X	X
9.19s analyze responses in organisms that result from internal and external stimuli;	X	X
9.20s describe feedback mechanisms that allow organisms to maintain stable internal conditions;	X	X
9.21s identify the abiotic and biotic components of an ecosystem;	X	X
9.22s describe the interrelationships among producers, consumers, and decomposers in an ecosystem; and	X	X
9.23s analyze and describe adaptive characteristics that result in a population's or species' unique niche in an ecosystem.	X	X

Standard X: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in Earth and space science.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
10.1k properties of Earth materials;		X
10.2k changes in Earth systems; and		X
10.3k characteristics of the Sun, moon, and stars.		X
10.4k all content specified for teachers in grades EC–4;		X
10.5k the structure and function of Earth systems;		X
10.6k cycles in Earth systems;		X
10.7k the role of energy in weather and climate;		X
10.8k characteristics of the solar system and the universe;		X
10.9k the history of Earth; and		X
10.10k the history of the universe.		X
Application: What Teachers Can Do		
10.1s describe properties and uses of rocks, soils, water, atmospheric gases, and other Earth materials;	X	X
10.2s describe characteristics of weather, tools for making weather measurements, and changes in weather;	X	X
10.3s describe forces and processes that change the surface of Earth (e.g., glaciers, earthquakes, weathering);	X	X
10.4s identify objects in the sky and describe their characteristics (e.g., Sun as Earth's major energy source, position of the planets in relation to the Sun); and	X	X
10.5s describe the basic characteristics of the Sun and other stars; analyze the consequence of the moon's orbit around Earth (e.g., phases of the moon) and Earth's orientation and movement around the Sun (e.g., day and night, the seasons)	X	X

Standard X: The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in Earth and space science.	ELE 522	PACT
10.6s apply all skills specified for teachers in grades EC–4, using content and contexts appropriate for grades 4–8;	X	X
10.7s analyze and describe characteristics of the geosphere, the hydrosphere, the atmosphere, and the biosphere;	X	X
10.8s analyze a variety of Earth cycles (e.g., rock cycle, water cycle, carbon cycle, nitrogen cycle);	X	X
10.9s analyze and describe how human activity and natural processes, both gradual and catastrophic, can alter Earth systems;	X	X
10.10s identify properties of and analyze interactions among the components of the solar system;	X	X
10.11s explain weather measurements and analyze weather processes;	X	X
10.12s analyze how the Earth's position, orientation, and surface features affect weather and climate; and	X	X
10.13s examine characteristics of the universe, such as distances, stars, and galaxies, and describe scientific theories of the origin of the universe.	X	X

Standard XI: The science teacher knows unifying concepts and processes that are common to all sciences.	ELE 522	PACT
Teacher Knowledge: What Teachers Know		
11.1k how systems and subsystems can be used as a conceptual framework to organize and unify the common themes of science and technology;		X
11.2k how patterns in observations and data which explain natural phenomena allow predictions to be made;		X
11.3k how the concepts and processes listed below provide a unifying framework across the science disciplines: • systems, order, and organization; • evidence, models, and explanation; • change, constancy, and measurements; • evolution and equilibrium; and • form and function;		X
11.4k properties and patterns of systems can be described in terms of space, time, energy, and matter;		X
11.5k how change and constancy occur in systems;		X
11.6k the complementary nature of form and function in a given system; and		X
11.7k how models are used to represent the natural world and how to evaluate the strengths and limitations of a variety of scientific models (e.g., physical, conceptual, mathematical).		X
Application: What Teachers Can Do		
11.1s apply the systems model to identify and analyze common themes that occur in physical science, life science, and Earth and space science;	X	X
11.2s analyze a system (e.g., a cell, the ocean, an ideal gas) in terms of cycles, structure, and processes;	X	X

Standard XI: The science teacher knows unifying concepts and processes that are common to all sciences.		
11.3s analyze the general features of systems (e.g., input, process, output, feedback);	X	X
11.4s analyze the interactions that occur between the components of a given system or subsystem;	X	X
11.5s analyze the interactions and interrelationships between various systems and subsystems; and	X	X
11.6s use the systems model to analyze the concepts of constancy (e.g., conservation of mass, energy, and momentum) and change (e.g., evolution).	X	X