MEMORANDUM OF UNDERSTANDING

Stephen F. Austin State University

and

Nacogdoches Independent School District

This Memorandum of Understanding (MOU) is made by and between Stephen F. Austin State University (hereinafter "SFA") and Nacogdoches Independent School District (hereinafter "NISD"), to provide College Preparatory Courses in math and English language arts (hereinafter “CCR”) to qualified students of Nacogdoches high schools.

PURPOSE AND SCOPE OF SERVICES

The Texas Education Code (“TEC”) Section 28.014 requires that school districts partner with at least one institution of higher education to develop and provide courses in college preparatory mathematics and English language arts to prepare students for success in entry-level college courses. The purpose of this MOU is to establish the parties' intention to work together to fulfill the requirements of applicable state law as it pertains to the students of NISD.

The CCR courses are offered to students in the 12th grade who have demonstrated (through assessments) that they are not ready to perform entry-level college coursework. A student who successfully completes such a CCR course will be well-prepared for the requirements of the Texas Success Initiative (“TSI”) in that content area at SFA. The parties mutually agree to the following:

- The TSI Assessment will be used to determine college readiness and help identify students who would benefit most from such coursework.
- All statutes and rules relating to college preparatory, to include those governing student eligibility and course requirements, continue to be valid and shall be followed.
- The relevant Texas College and Career Readiness Standards for Math and English will function as the benchmark for college readiness expectations for each locally developed college preparatory course.
- Each student completing the college preparatory course shall be required to complete the TSI Assessment in that content area in order to demonstrate mastery, either at midterm and/or upon completion of the course.

TERM/TERMINATION

Subject to any annual approvals that may be required by the Texas Education Agency (“TEA”) or by the Texas Higher Education Coordinating Board (“THECB”), the term of this MOU shall begin on the date that this MOU is fully-executed and will continue until either party notifies the other in writing of their intent to terminate the agreement. The parties agree to provide at least thirty (30) days-notice of intent to terminate.

DUTIES & RESPONSIBILITIES

SFA hereby agrees to:

I. Encumber staff designated by the university to provide guidance and input to the creation and maintenance of the course requirements for the CCR college preparatory math and English courses.
II. Provide resources and guidance to the NISD and SFA staff creating and maintaining these courses and standards.
III. Develop CCR curriculum in collaboration with NISD. Meet regularly to ensure course alignment with college readiness standards.
IV. Endorse and support CCR courses created by NISD and SFA staff.
V. May collaborate with NISD to hold information sessions at NISD for potential students and their parents.

NISD hereby agrees to:

I. Select qualified staff to teach CCR math and English courses.
II. Ensure that CCR instructors receive training from instructional coaches in their content area regarding the execution and expectations of the CCR courses.
III. Provide SFA and NISD offices with data as needed regarding student progress and TSI measures at semester and/or end of year.
IV. Identify students who are eligible for the college preparatory courses at the end of 11th grade in accordance with Section 28.014 of the Texas Education Code.
V. Assume responsibility for providing information to potential college preparatory students.
VI. Develop CCR curriculum in collaboration with SFA. Meet regularly to ensure course alignment with college readiness standards.
VII. Adhere to the curriculum matrices (math and English) created by designated NISD and SFA staff for this course. The TSI English and TSI Math curriculum matrices, located in Exhibit A and B, respectively, are hereby incorporated into this MOU.
VIII. Hold classes on NISD campus and/or assist students with remote learning when applicable.

E-SIGNED by Gabriel Trujillo on 2021-11-17 20:31:35 CST

Gabriel Trujillo, Ed.D.
Superintendent of Schools
Nacogdoches Independent School District

November 17, 2021
Date

E-SIGNED by Lorenzo Smith on 2021-11-16 18:05:10 CST

Lorenzo Smith, Ph.D.
Provost & VP of Academic Affairs
Stephen F. Austin State University

November 16, 2021
Date

EXHIBIT A

TSI English

Curriculum Matrix

Writing			
Revised CCRS 2018	**TEKS Alignment**	**Core Assignments / Methodologies**	**Notes**
A) Compose a variety of texts that demonstrate clear focus, the logical development of ideas in well-organized paragraphs, and the use of appropriate language that advances the author's purpose.			
1. Determine effective approaches, genres, rhetorical techniques, and media that demonstrate understanding of the writer's purpose and audience.	9A. plan a piece of writing appropriate for various purposes and audiences by generating ideas through a range of strategies such as brainstorming, journaling, reading, or discussing;	Instruction in Modes of Writing 1st semester—Narration, Description 2nd semester—Description, Cause/Effect, Compare/Contrast, Definition, Process Analysis, Persuasion	Emphasis will be on writing for an audience and a purpose, encouraging students to connect the genre with the context and the audience. Rhetorical triangle
2. Generate ideas, gather information, and manage evidence relevant to the topic and purpose.	9B. develop drafts into a focused, structured, and coherent piece of writing in timed and open-ended situations by: i. using strategic organizational structures appropriate to purpose, audience, topic, and context; and ii. developing an engaging idea reflecting depth of thought with effective use of rhetorical devices, details, examples, and commentary;	1st semester—emphasis on paragraph construction 2nd semester—essay construction Inverted pyramid introduction Thesis: focused, significant, supportable, controversial, directed Topic sentences Conclusion that doesn't repeat thesis	All writing will be done through workshop and process. Drafting, revision, conferencing, risk taking, ownership of language are aims for every writing task.
3. Review feedback and revise each draft by organizing it more logically and fluidly, refining key ideas, and using language more precisely and effectively.	9C revise drafts to improve clarity, development, organization, style, diction, and sentence fluency, both within and between sentences;	Writing Workshop—weekly writing conferences and revision model Multiple drafts with teacher and peer feedback throughout the process.	180 Days Reading/Writing Workshop
5. Edit writing for audience, purpose, context, and style, assuring that it conforms to Standard American English, when appropriate.	9D edit drafts to demonstrate a command of standard English conventions using a style guide as appropriate;	Direct teach sentence construction With an emphasis on sentence clarity in written work. Mini-lessons on compound/complex sentences, parallelism, etc.	Killgallon, Jeff Anderson

Reading			
Revised CCRS 2018	**TEKS Alignment**	**Assignments / Methodology**	**Notes**
B) Identify, analyze, and evaluate information within and across texts of varying lengths and genres.			
1. Use effective reading strategies to determine a written work's purpose and intended audience.	8A evaluate the author's purpose, audience, and message within a text;	Annotation Lessons Depth and Complexity Icons	All in-class reading will be information/non-fiction. Fiction will be addressed in book clubs and self-selected reading.
2. Use text features to form an overview of content and to locate information.	8B evaluate use of text structure to achieve the author's purpose;	Instruction on text features 1st semester: organizational structures such as: introduction, thesis	

		2nd semester: argumentative structures such as concession, evidence, counterargument	
3. Identify explicit and implicit textual information including main ideas and author's purpose.	4G evaluate details read to analyze key ideas;	Summary and Shared Inquiry discussion	https://www.greatbooks.org/nonprofit-organization/what-is-shared-inquiry/
4. Make evidence-based inferences about a text's meaning, intent, and values.	4F make inferences and use evidence to support understanding;	Focus on use of evidence to support conclusions. 1st semester: shared inquiry discussions 2nd semester: evidence use in essay writing	
5. Analyze and evaluate implicit and explicit arguments in a variety of texts for the quality and coherence of evidence and reasoning.	5G discuss and write about the explicit and implicit meanings of text;	Shared inquiry I-search Research second semester Depth and Complexity Icons	J. Taylor Depth & Complexity workshop
6. Identify and analyze the author's use of rhetorical and literary devices to create meaning and affect the reader.	8D critique and evaluate how the author's use of language informs and shapes the perception of readers; 8F evaluate how the author's diction and syntax contribute to the effectiveness of a text; and 8G analyze the effects of rhetorical devices and logical fallacies on the way the text is read and understood.	Annotation Shared Inquiry Depth and Complexity Icons Analysis paragraph writing	
7. Compare and analyze how features of genre are used across texts.	5B write responses that demonstrate analysis of texts, including comparing texts within and across genres;	Annotation Shared Inquiry Depth and Complexity Icons Compare/Contrast writing	
8. Identify, analyze, and evaluate similarities and differences in how multiple texts present information, argue a position, or relate a theme.	5E. interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;	Annotation Shared Inquiry Depth and Complexity Icons Compare/Contrast, Description, Cause/Effect, Analysis	
E) Acquire insights about oneself, others, or the world from reading diverse texts.			
1. Make text-to-self, text-to-text, and text-to-world connections.	3 The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time. 5A describe personal connections to a variety of sources, including self-selected texts;	Book Club Conferencing Shared Inquiry	Harvey Daniels Literature Circles
2. Recognize the potential of diverse texts to cultivate empathy.	4E make connections to personal experiences, ideas in other texts, and society;	Book Club Conferencing Shared Inquiry	Accountable Talk http://www.ascd.org/publications/books/108035/chapters/Procedures-for-Classroom-Talk.aspx

Speaking			
Revised CCRS 2018	**TEKS Alignment**	**Core Assignments / Methodologies**	**Notes (or something else)**
F) Understand the elements of both formal and informal communication in group discussions, one-on-one situations, and presentations.			

1. Participate actively, effectively, and respectfully in one-on-one oral communication as well as in group discussions.	5H respond orally or in writing with appropriate register and purposeful vocabulary, tone, and voice;	Shared Inquiry Socratic Seminar Think Law Writing Workshop	
2. Engage in reasoned dialogue, including with people who have different perspectives.	1A engage in meaningful and respectful discourse when evaluating the clarity and coherence of a speaker's message and critiquing the impact of a speaker's use of diction, syntax, and rhetorical strategies;	Shared Inquiry Socratic Seminar Think Law Writing Workshop	
5. Plan and deliver focused, coherent presentations that convey clear and distinct perspectives and demonstrate sound reasoning.	1C formulate sound arguments and present using elements of classical speeches such as introduction, first and second transitions, body, conclusion, the art of persuasion, rhetorical devices, employing eye contact, speaking rate such as pauses for effect, volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively;	Presentations	Digital Story Telling https://creativeeducator.tech4learning.com/lessons/digital-storytelling https://elearningindustry.com/18-free-digital-storytelling-tools-for-teachers-and-students https://1.cdn.edl.io/w4JCMulNK1gWYzbaiNZOIEvBkkBr8k42oZ7xxp90lLVCZImE.pdf

Listening			
Revised CCRS 2018	**TEKS Alignment**	**Core Assignments / Methodologies**	**Notes (or something else)**
G) Apply listening skills in a variety of settings and contexts			
1. Use a variety of active listening strategies to enhance comprehension	4I monitor comprehension and make adjustments such as re-reading, using background knowledge, asking questions, annotating, and using outside sources when understanding breaks down.	Socratic Seminar Shared Inquiry Book Club Writing Workshop	
2. Listen critically and respond appropriately	1D participate collaboratively, offering ideas or judgments that are purposeful in moving the team toward goals, asking relevant and insightful questions, tolerating a range of positions and ambiguity in decision making, and evaluating the work of the group based on agreed-upon criteria.	Think Law Lessons Writing Workshop Socratic Seminar Book Club	
4. Comprehend detailed instructions, explanations, and directions in a range of contexts (e.g., specialized contexts such as workplace procedures and operating instructions).	1B follow and give complex instructions, clarify meaning by asking pertinent questions, and respond appropriately;	Think Law lessons How to read and respond to a writing prompt How to read and respond to peer and teacher feedback	

Research			
Revised CCRS 2018	**TEKS Alignment**	**Core Assignments / Methodologies**	**Notes (or something else)**
H) Formulate topic and questions			
1. Articulate and investigate research questions.	11A develop questions for formal and informal inquiry;	Provide question stems to assist students in developing a complex question	https://www.gallaudet.edu/tutorial-and-instructional-programs/english-

			center/citations-and-references/i-search-paper-format-guide
2. Explore and refine a research topic.	11D modify the major research question as necessary to refocus the research	I-Search Research Assist in addressing a topic that is not a one-click google topic. Address complexity.	
I) Locate, evaluate, and select information from a variety of sources.			
1. Explore and collect a range of potential sources.	11E locate relevant sources;	I-Search Research—conduct field and library research using both primary and secondary sources	
3. Assess the relevance and credibility of sources	11G examine sources for: **i.** credibility, bias, and accuracy; and	Guide students to understand source credibility	
J) Design and produce an effective product.			
1. Integrate and organize material effectively.	11F synthesize information from a variety of sources;	Composing the I-Search Outlining Synthesis	
2. Use and attribute source material ethically	11 H display academic citations, including for paraphrased and quoted text, and use source materials ethically to avoid plagiarism	MLA Or APA Introduce PurdueOWL	

EXHIBIT B

TSI Math

Curriculum Matrix

Numeric Reasoning			
Revised CCRS 2018	**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
I. **Numeric Reasoning** including number representations and operations, number sense and number concepts and systems of measurement			
A. Compare relative magnitudes of rational and irrational numbers, and understand that numbers can be represented in different ways.	8.2.A The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers.	***Ability to follow directions*** – In addition to be a creative thinker, students need to be able to follow directions, both simple and more complex. Instructions about how to do an assignment may be very specific, and students need to be able to give instructors exactly what they have been asked to give. ***Study Skills*** – To prepare for college, students must be able to work more independently and learn more content than in high school. Students should be able to organize work, read carefully, and plan and prepare for tests. ***Self-management*** – Time management is important to college success and should be taught. Self-management includes monitoring grades, time-management, and class preparedness.	
B. Perform computations with rational and irrational numbers.	7.3.A The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to add, subtract, multiply, and divide rational numbers fluently.		
C. Use estimation to check for errors and reasonableness of solutions.	A.1.B The student is expected to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
D. Interpret the relationships between the different representations of numbers.	6.2.A The student is expected to classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers.		
E. Select or use the appropriate type of method, unit, and tool for the attribute being measured.	A.1.C The student is expected to select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.		
F. Convert units within and between systems of measurement.	6.4.H The student is expected to convert units within a measurement system, including the use of proportions and unit rates.		

Algebraic Reasoning			
Revised CCRS 2018	**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
II. **Algebraic Reasoning** including identifying expressions and equations, manipulating expressions, solving equations, inequalities, and systems of equations and inequalities, and representing relationships.			
A. Explain the difference between	6.7.B The student will be able to distinguish between expressions and	***Engagement*** – Students who participate actively in their own education and work	

	expressions and equations.	equations verbally, numerically, and algebraically	hard, will learn more and be more successful in their classes. ***Communication*** – Students need to have the ability to listen and express themselves effectively with other students and faculty members. Help students to learn the importance of communication in their lives. ***Teamwork and Collaboration*** – Students will need to be able to work effectively with other students to be successful in the workplace. Projects as part of a group or team will lead to facilitating the effectiveness of collaboration.	
B.	Recognize and use algebraic properties, concepts, and algorithms to combine, transform, and evaluate expressions (e.g., polynomials, radicals, rational expressions).	A.10 The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms and perform operations on polynomial expressions.		
C.	Describe and interpret solution sets of equalities and inequalities.	A.5.A,B The student will be able to solve linear equations and linear inequalities in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides.		
D.	Explain the difference between the solution set of an equation and the solution set of an inequality.	A.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
E.	Recognize and use algebraic properties, concepts, and algorithms to solve equations, inequalities, and systems of linear equations and inequalities.	A.5.A,B,C The student will be able to solve linear equations and linear inequalities in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides, and solve systems of two linear equations with two variables for mathematical and real-world problems.		
F.	Interpret multiple representations of equations, inequalities, and relationships.	A.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
G.	Convert among multiple representations of equations, inequalities, and relationships	A.1.D The student will be able to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.		

Geometric and Spatial Reasoning				
Revised CCRS 2018		**TEKS Alignment**	**College and Career Readiness Skills**	**Notes (or something else)**
III.	**<u>Geometric and Spatial Reasoning</u>** including figures and their properties, transformations and symmetry, connections between geometry and other mathematical content strands, and measurements involving geometry and algebra.			
A.	Recognize characteristics and dimensional changes of two- and three-dimensional figures.	G.10.B The student will be able to determine and describe how changes in the linear dimensions of a shape affect its perimeter, area, surface area, or volume, including proportional and non-proportional dimensional change.	***Responsibility*** – To be prepared for college, students need to take responsibility for academic, personal and social aspects in education. Help students learn to take responsibility for their actions in all aspects of the classroom. ***Self Advocacy*** - Help your students learn how to identify their needs and be able to explain them to others. Help them learn how to ask for help when they need it. ***Study Skills*** – To prepare for college, students must be able to work more independently and learn more content than in high school.	
B.	Form and validate conjectures about one-, two-, and three-dimensional figures and their properties.	G.5 The student uses constructions to validate conjectures about geometric figures.		
C.	Recognize and apply right triangle relationships	G.9.A The student will be able to determine the lengths of sides and measures of angles in a right triangle by		

	including basic trigonometry.	applying the trigonometric ratios sine, cosine, and tangent to solve problems.	Students should be able to organize work, read carefully, and plan and prepare for tests.	
D.	Identify transformations and symmetries of figures.	G.3.A The student will be able to describe and perform transformations of figures in a plane using coordinate notation.		
E.		G.6.A The student will be able to apply the definition of congruence, in terms of rigid transformations, to identify congruent figures and their corresponding sides and angles.		
F.	Make connections between geometry and algebraic equations	G.2 The student uses the process skills to understand the connections between algebra and geometry.		
G.	Make connections between geometry, statistics, and probability.	G.13.D The student will be able to apply conditional probability in contextual problems.		
H.	Find the perimeter and area of two-dimensional figures.	G.11.B The student will be able to determine the area of composite two-dimensional figures to solve problems using appropriate units of measure.		
I.	Determine the surface area and volume of three-dimensional figures	G.11.C,D The student will be able to apply the formulas for the total and lateral surface area and volume of three-dimensional figures.		
J.	Determine indirect measurements of geometric figures using a variety of methods.	G.11.D The student will be able to solve problems using appropriate units of measure.		

Probabilistic Reasoning				
Revised CCRS 2018		**TEKS Alignment**	**College and Career Readiness Skills**	**Notes (or something else)**
IV.	**<u>Probabilistic Reasoning</u>** including counting principles, computation and interpretation of probabilities, and measurement involving probability.			
A.	Determine the nature and the number of elements in a finite sample space	G.13.A The student will be able to develop strategies to use permutations and combinations to solve contextual problems.	***Comfort with Technology*** – Students need skills beyond surfing the internet and texting. Help students to learn skills with online research, email communication, and various software programs. ***Teamwork and Collaboration*** – Students will need to be able to work effectively with other students to be successful in the workplace. Projects as part of a group or team will lead to facilitating the effectiveness of collaboration.	
B.	Compute and interpret the probability of an event and its complement.	G.13.D The student will be able to apply conditional probability in contextual problems.		
C.	Compute and interpret the probability of compound events.	G.13.C The student will be able to identify whether two events are independent and compute the probability of the two events occurring together with or without replacement.		
D.	Use probability to make informed decisions.	A.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		

Statistical Reasoning				
Revised CCRS 2018		**TEKS Alignment**	**College and Career Readiness Skills**	**Notes (or something else)**
V.	**<u>Statistical Reasoning</u>** including designing a study, describing data, and analyzing, interpreting, and drawing conclusions from data			

A. Formulate a statistical question, plan an investigation, and collect data.	A.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy,	***Critical Thinking and Problem Solving*** – Students will need to be able to move beyond restatement of facts or classroom material and be able to think critically and analytically. Encourage students to develop questioning strategies that will help them solve problems. ***Personal Goals*** – Have students set personal goals for studying, grades, and assignments in class. Remind them to update or adjust their goals in order to become more engaged in their learning.	
B. Classify types of data.	A.1.E The student will be able to create and use representations to organize, record, and communicate mathematical ideas.		
C. Construct appropriate visual representations of data.			
D. Compute and describe the study data with measures of center and basic notions of spread.	Q.4.P The student will be able to create data displays for given data sets to investigate, compare, and estimate center, shape, spread, and unusual features of the data.		
E. Describe patterns and departure from patterns in the study data.	Q.4.P The student will be able to create data displays for given data sets to investigate, compare, and estimate center, shape, spread, and unusual features of the data.		
F. Analyze data sets using graphs and summary statistics.	Q.4.T The student will be able to communicate statistical results in oral and written formats using appropriate statistical and nontechnical language.		
G. Analyze relationships between paired data using spreadsheets, graphing calculators, or statistical software	Q.4.K The student will be able to determine the need for and purpose of a statistical investigation and what type of statistical analysis can be used to answer a specific question or set of questions.		
H. Make predictions using summary statistics	Q.4.D The student will be able to interpret conditional probabilities and probabilities of compound events by analyzing representations to make decisions in problem situations		
I. Identify and explain misleading uses of data.	Q.4.J The student will be able to identify potential misuses of statistics to justify particular conclusions, including assertions of a cause-and-effect relationship rather than an association, and missteps or fallacies in logical reasoning.		

Functions			
Revised CCRS 2018	**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
VI. **Functions** including recognition and representation of functions, analysis of functions, and model real-world situations with functions			
A. Recognize if a relation is a function	A.12.A The student will be able to decide whether relations represented verbally, tabularly, graphically, and symbolically define a function.	***Ability to Work Independently*** – Students need to do larger blocks of work on their own, keep track of their work and be responsible for completion of classwork without constant encouragement from the teacher to remain engaged. ***Study Skills*** – To prepare for college, students must be able to work more independently and learn more content than in high school. Students should be able to organize work, read carefully, and plan and prepare for tests.	
B. Recognize and distinguish between different types of functions	A2.8.A The student will be able to analyze data to select the appropriate model from among linear, quadratic, and exponential models.		
C. Understand and analyze features of a functions	A.7.A The student will be able to graph quadratic functions on the coordinate plane and use the graph to identify key attributes, if possible, including *x*-intercept, *y*-intercept, zeros, maximum value, minimum values, vertex, and the equation of the axis of symmetry.		
D. Algebraically construct and	A.2.B The student will be able to write linear equations in two variables in various forms.		

	analyze new functions			
E.	Apply known functions to model real-world situations.	A.1.A The student will be able to apply mathematics to problems arising in everyday life, society, and the workplace.		
F.	Develop a function to model a situation.	A.1.E The student will be able to create and use representations to organize, record, and communicate mathematical ideas.		

Problem Solving and Reasoning				
Revised CCRS 2018		**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
VII.	**Problem Solving and Reasoning** including mathematical problem solving, proportional reasoning, logical reasoning, and real-world problem solving			
A.	Analyze given information.	A.1.F The student will be able to analyze mathematical relationships to connect and communicate mathematical ideas.	***Innovative and Creative Thinking*** – Urge students to "think outside the box" to be able to apply a new approach to solving problems. Ask students to go beyond the facts or simple understanding. Encourage students to learn new ideas and new ways to approach solving a problem. ***Personal Goals*** – Have students set personal goals for studying, grades, and assignments in class. Remind them to update or adjust their goals in order to become more engaged in their learning.	
B.	Formulate a plan or strategy.	A.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
C.	Determine a solution.	A.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
D.	Justify the solution.	A.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
E.	Evaluate the problem-solving process.	A.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
F.	Use proportional reasoning to solve problems that require fractions, ratios, percentages, decimals, and proportions in a variety of contexts using multiple representations.	G.7.A The student will be able to apply the definition of similarity in terms of a dilation to identify similar figures and their proportional sides.		
G.	Develop and evaluate convincing arguments	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
H.	Understand attributes and relationships with inductive and deductive reasoning.	G.4.A The student will be able to distinguish between undefined terms, definitions, postulates, conjectures, and theorems.		

I. Interpret results of the mathematical problem in terms of the original real-world situation.	G.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		
J. Evaluate the problem-solving process	G.1.B The student will be able to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.		

Communication and Representation			
Revised CCRS 2018	**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
VIII. **Communication and Representation** including Language, terms, and symbols of mathematics, interpretation of mathematical work, and presentation and representation of mathematical work			
A. Use mathematical symbols, terminology, and notation to represent given and unknown information in a problem.	G.1.D The student will be able to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	***Communication*** – Students need to have the ability to listen and express themselves effectively with other students and faculty members. Help students to learn the importance of communication in their lives. ***Teamwork and Collaboration*** – Students will need to be able to work effectively with other students to be successful in the workplace. Projects as part of a group or team will lead to facilitating the effectiveness of collaboration. ***Self Advocacy*** - Help your students learn how to identify their needs and be able to explain them to others. Help them learn how to ask for help when they need it.	
B. Use mathematical language to represent and communicate the mathematical concepts in a problem.	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
C. Use mathematical language for reasoning, problem solving, making connections, and generalizing	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
D. Model and interpret mathematical ideas and concepts using multiple representations.	G.1.D The student will be able to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.		
E. Summarize and interpret mathematical information provided orally, visually, or in written form within the given context.	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		
F. Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, models, graphs, and words	G.1.D The student will be able to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.		
G. Create and use representations to organize, record, and	G.1.E The student will be able to create and use representations to organize, record, and communicate mathematical ideas.		

	communicate mathematical ideas.			
H.	Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications.	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.		

Connections				
Revised CCRS 2018		**TEKS Alignment**	**College and Career Readiness Skills**	**Notes**
IX.	**Connections** including connections among the strands of mathematics and connections of mathematics to nature, real-world situations, and everyday life.			
A.	Connect and use multiple key concepts of mathematics in situations and problems.	G.1.G The student will be able to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	***Innovative and Creative Thinking*** – Urge students to "think outside the box" to be able to apply a new approach to solving problems. Ask students to go beyond the facts or simple understanding. Encourage students to learn new ideas and new ways to approach solving a problem. ***Understand Post-Secondary Educational Options*** – Have students investigate universities, junior colleges, and technical schools. Have the students look at costs and pros and cons of each.	
B.	Connect mathematics to the study of other disciplines.	MM.Intro.3 Students learn to apply mathematics through experiences in personal finance, science, engineering, fine arts, and social sciences.		
C.	Use multiple representations to demonstrate links between mathematical and real-world situations.	MM.1.A The student will be able to apply mathematics to problems arising in everyday life, society, and the workplace		
D.	Understand and use appropriate mathematical models in the natural, physical, and social sciences.	MM.1.A The student will be able to apply mathematics to problems arising in everyday life, society, and the workplace		
E.	Know and understand the use of mathematics in a variety of careers and professions	6.14.H The student will be able to compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income.		