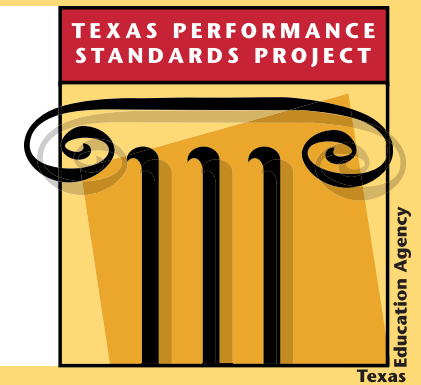


Continuum of Learning Experiences Framework Overview



The kindergarten through grade eight Continuum of Learning Experiences Framework (COLEF) charts can be used to guide students through the research process to ensure depth and complexity of learning. Each framework chart provides grade level and beyond grade level English Language Arts and Reading TEKS for developing a research plan, conducting authentic research, and sharing findings. In addition the foundation curriculum TEKS of math, science, and social studies are included to provide guidance for utilizing and implementing discipline-appropriate inquiry methods. Each chart also references the six scoring dimensions from the Texas Performance Standards Project (TPSP) and the Texas College and Career Readiness Standards (CCRS). The framework charts are a resource for assisting teachers in developing a continuum of learning experiences that leads to the development of advanced-level products and/or performances resulting from in-depth research.



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
<p>1. Develop Research Plan</p> <ul style="list-style-type: none"> • Define problem or topic and research questions • Review sources of information/ data 	<p>Grade 7: (22) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to: (A) brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and (B) apply steps for obtaining and evaluating information from a wide variety of sources and create a written plan after preliminary research in reference works and additional text searches.</p> <p>Grade 8: (22) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to: (A) brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and (B) apply steps for obtaining and evaluating information from a wide variety of sources and create a written plan after preliminary research in reference works and additional text searches.</p>	<p>1. Content Knowledge and Skills (CKS) are the key facts, concepts, principles, skills, themes, and methods of inquiry of a discipline. Through planned educational experiences, gifted and talented students begin to access advanced content and develop the skills necessary to manipulate content in sophisticated ways in a variety of contexts. The Texas Essential Knowledge and Skills (TEKS) are the core curriculum and as such serve as the basis of differentiation for students' levels of achievement and areas of giftedness.</p> <p>4. Research (R) is the inquiry process used in the discipline. Steps in the PSP research process include the following:</p> <ul style="list-style-type: none"> • Defining the research problem • Reviewing quality sources of information • Refining the research question(s) • Developing the research design • Carrying out the research design • Analyzing the results • Reporting the findings through a product and/or presentation 	<p>Math: (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: (A) apply mathematics to problems arising in everyday life, society, and the workplace.</p> <p>Science: (2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to: (A) plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology; [and] (B) design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology.</p> <p>Social Studies: (23) Social studies skills. The student uses problem-solving and decision-making skills, working independently</p>	<p>Cross-Disciplinary Standards: I.A.1. Engage in scholarly inquiry and dialog. I.C.1. Analyze a situation to identify a problem to be solved. I.D.1. Self-monitor learning needs and seek assistance when needed. I.D.2. Use study habits necessary to manage academic pursuits and requirements. I.E.1. Work independently. I.E.2. Work collaboratively. I.F.2. Evaluate sources for quality of content, validity, credibility, and relevance. II.C.1. Understand which topics or questions are to be investigated. II.C.2. Explore a research topic. II.C.3. Refine research topic based on preliminary research and devise a timeline for completing work. II.C.4. Evaluate the validity and reliability of sources. II.D.2. Use statistical and probabilistic skills necessary for planning an investigation and collecting, analyzing, and interpreting data.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
	<p>Grade 9: (20) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:</p> <ul style="list-style-type: none"> (A) brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and (B) formulate a plan for engaging in research on a complex, multi-faceted topic. 		<p>and with others, in a variety of settings. The student is expected to:</p> <ul style="list-style-type: none"> (A) use a problem-solving process to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution; and (B) use a decision-making process to identify a situation that requires a decision, gather information, identify options, predict consequences, and take action to implement a decision. 	
<p>2. Develop and Carry Out Research Design</p> <ul style="list-style-type: none"> • Refine research questions • Gather information/data 	<p>Grade 7: (23) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:</p> <ul style="list-style-type: none"> (A) follow the research plan to gather information from a range of relevant print and electronic sources using advanced search strategies; (B) categorize information thematically in order to see the larger constructs inherent in the information; (C) record bibliographic information (e.g., author, title, page number) for 	<p>1. Content Knowledge and Skills (CKS) are the key facts, concepts, principles, skills, themes, and methods of inquiry of a discipline. Through planned educational experiences, gifted and talented students begin to access advanced content and develop the skills necessary to manipulate content in sophisticated ways in a variety of contexts. The Texas Essential Knowledge and Skills (TEKS) are the core curriculum and as such serve as the basis of differentiation for students' levels of achievement and areas of giftedness.</p> <p>3. Multiple Perspectives (MP) include the consideration of other,</p>	<p>Math: (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> (B) 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; [and] (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, 	<p>Cross-Disciplinary Standards:</p> <p>I.B.3. Gather evidence to support arguments, findings, or lines of reasoning.</p> <p>I.C.2. Develop and apply multiple strategies to solve a problem.</p> <p>I.C.3. Collect evidence and data systematically and directly relate to solving a problem.</p> <p>I.D.3. Strive for accuracy and precision.</p> <p>I.F.1. Attribute ideas and information to source materials and people.</p> <p>I.F.3. Include the ideas of others and the complexities of the debate, issue, or problem.</p> <p>I.F.4. Understand and adhere to ethical codes of conduct.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
	<p>all notes and sources according to a standard format; and</p> <p>(D) differentiate between paraphrasing and plagiarism and identify the importance of citing valid and reliable sources.</p> <p>Grade 8: (23) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather.</p> <p>Students are expected to:</p> <p>(A) follow the research plan to gather information from a range of relevant print and electronic sources using advanced search strategies;</p> <p>(B) categorize information thematically in order to see the larger constructs inherent in the information;</p> <p>(C) record bibliographic information (e.g., author, title, page number) for all notes and sources according to a standard format; and</p> <p>(D) differentiate between paraphrasing and plagiarism and identify the importance of using valid and reliable sources.</p>	<p>diverse points of view in order to deepen one's understanding of a discipline or field of study. Examples of skills that promote this dimension include identifying points of view, recognizing the values and beliefs that influence individuals' and groups' perspectives on issues, distinguishing between statements that can be proven and statements that reflect personal beliefs or judgments, and reevaluating personal viewpoints in relation to others.</p> <p>4. Research (R) is the inquiry process used in the discipline. Steps in the PSP research process include the following:</p> <ul style="list-style-type: none"> • Defining the research problem • Reviewing quality sources of information • Refining the research question(s) • Developing the research design • Carrying out the research design • Analyzing the results • Reporting the findings through a product and/or presentation 	<p>including mental math, estimation, and number sense as appropriate, to solve problems.</p> <p>Science:</p> <p>(2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations.</p> <p>The student is expected to:</p> <p>(C) collect and record data using the International Systems of Units (SI) and qualitative means such as labeled drawings, writing, graphic organizers.</p> <p>(3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists.</p> <p>The student is expected to:</p> <p>(D) relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content.</p> <p>(4) Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry.</p> <p>The student is expected to:</p>	<p>II.A.1. Use effective prereading strategies.</p> <p>II.A.2. Use a variety of strategies to understand the meanings of new words.</p> <p>II.A.3. Identify the intended purpose and audience of the text.</p> <p>II.A.4. Identify the key information and supporting details.</p> <p>II.A.5. Analyze textual information critically.</p> <p>II.A.6. Annotate, summarize, paraphrase, and outline texts when appropriate.</p> <p>II.A.7. Adapt reading strategies according to structure of texts.</p> <p>II.A.8. Connect reading to historical and current events and personal interest.</p> <p>II.E.1. Use technology to gather information.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
	<p>Grade 9: (21) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:</p> <ul style="list-style-type: none"> (A) follow the research plan to compile data from authoritative sources in a manner that identifies the major issues and debates within the field of inquiry; (B) organize information gathered from multiple sources to create a variety of graphics and forms (e.g., notes, learning logs); and (C) paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number). 		<p>(A) use appropriate tools to collect, record, and analyze information, including life science models, hand lens, stereoscopes, microscopes, beakers, Petri dishes, microscope slides, graduated cylinders, test tubes, meter sticks, metric rulers, metric tape measures, timing devices, hot plates, balances, thermometers, calculators, water test kits, computers, temperature and pH probes, collecting nets, insect traps, globes, digital cameras, journals/notebooks, and other equipment as needed to teach the curriculum; and</p> <p>(B) use preventive safety equipment including chemical splash goggles, aprons, and gloves and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher.</p> <p>Social Studies: (21) Social studies skills The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The student is expected to:</p> <ul style="list-style-type: none"> (A) differentiate between, locate, and use primary and secondary sources such as computer software, 	



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
			databases, media and news services, biographies, interviews, and artifacts to acquire information about Texas.	
<p>3. Analyze and Interpret Results</p> <ul style="list-style-type: none"> Clarify research questions Synthesize information/data Evaluate data Evaluate viewpoints (including own) 	<p>Grade 7: (24) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:</p> <p>(A) narrow or broaden the major research question, if necessary, based on further research and investigation; and</p> <p>(B) utilize elements that demonstrate the reliability and validity of the sources used (e.g., publication date, coverage, language, point of view) and explain why one source is more useful than another.</p> <p>Grade 8: (24) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:</p> <p>(A) narrow or broaden the major research question, if necessary, based on further research and investigation; and</p> <p>(B) utilize elements that demonstrate the reliability and</p>	<p>1. Content Knowledge and Skills (CKS) are the key facts, concepts, principles, skills, themes, and methods of inquiry of a discipline. Through planned educational experiences, gifted and talented students begin to access advanced content and develop the skills necessary to manipulate content in sophisticated ways in a variety of contexts. The Texas Essential Knowledge and Skills (TEKS) are the core curriculum and as such serve as the basis of differentiation for students' levels of achievement and areas of giftedness.</p> <p>2. Analysis and Synthesis (AS) include advanced thinking processes which enable students to make connections across time, disciplines, locations, and cultures. Examples of analysis include identifying characteristics and attributes, making observations, discriminating between same and different, comparing and contrasting, categorizing, finding patterns, and seeing relationships. Examples of synthesis include creating unique ideas, elaboration, and</p>	<p>Math:</p> <p>(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>(C) 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;</p> <p>(F) analyze mathematical relationships to connect and communicate mathematical ideas; [and]</p> <p>(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</p> <p>(2) Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to extend previous knowledge of sets and subsets using a visual representation</p>	<p>Cross-Disciplinary Standards:</p> <p>I.A.2. Accept constructive criticism and revise personal views when valid evidence warrants.</p> <p>I.B.1. Consider arguments and conclusions of self and others.</p> <p>I.B.4. Support or modify claims based on the results of an inquiry.</p> <p>II.C.5. Synthesize and organize information effectively.</p> <p>II.D.1. Identify patterns or departures from patterns among data.</p> <p>II.E.2. Use technology to organize, manage, and analyze information.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
	<p>validity of the sources used (e.g., publication date, coverage, language, point of view) and explain why one source is more useful and relevant than another.</p> <p>Grade 9: (22) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to: (A) modify the major research question as necessary to refocus the research plan; (B) evaluate the relevance of information to the topic and determine the reliability, validity, and accuracy of sources (including Internet sources) by examining their authority and objectivity; and (C) critique the research process at each step to implement changes as the need occurs and is identified.</p>	<p>discovering creative solutions to problems.</p> <p>3. Multiple Perspectives (MP) include the consideration of other, diverse points of view in order to deepen one's understanding of a discipline or field of study. Examples of skills that promote this dimension include identifying points of view, recognizing the values and beliefs that influence individuals' and groups' perspectives on issues, distinguishing between statements that can be proven and statements that reflect personal beliefs or judgments, and reevaluating personal viewpoints in relation to others.</p> <p>4. Research (R) is the inquiry process used in the discipline. Steps in the PSP research process include the following:</p> <ul style="list-style-type: none"> • Defining the research problem • Reviewing quality sources of information • Refining the research question(s) • Developing the research design • Carrying out the research design • Analyzing the results • Reporting the findings through a product and/or presentation 	<p>to describe relationships between sets of rational numbers.</p> <p>(6) Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to: (B) select and use different simulations to represent simple and compound events with and without technology; (G) solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents; (H) solve problems using qualitative and quantitative predictions and comparisons from simple experiments; [and] (I) determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.</p> <p>Science: (2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to: (D) construct tables and graphs, using repeated trials and means to</p>	



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
			<p>organize data and identify patterns; and</p> <p>(E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.</p> <p>(3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists. The student is expected to:</p> <p>(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student.</p> <p>Social Studies:</p> <p>(21) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The student is expected to:</p> <p>(B) analyze information by</p>	



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			<p>sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;</p> <p>(C) organize and interpret information from outlines, reports, databases, and visuals including graphs, charts, timelines, and maps;</p> <p>(D) identify points of view from the historical context surrounding an event and the frame of reference that influenced the participants;</p> <p>(E) support a point of view on a social studies issue or event;</p> <p>(F) identify bias in written, oral, and visual material;</p> <p>(G) evaluate the validity of a source based on language, corroboration with other sources, and information about the author; and</p> <p>(H) use appropriate mathematical skills to interpret social studies information such as maps and graphs.</p> <p>(23) Social studies skills. The student uses problem-solving and decision-making skills, working independently</p>	



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
			<p>and with others, in a variety of settings.</p> <p>The student is expected to:</p> <p>(A) use a problem-solving process to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution; and</p> <p>(B) use a decision-making process to identify a situation that requires a decision, gather information, identify options, predict consequences, and take action to implement a decision.</p>	
<p>4. Report Findings through Product and/or Presentation</p>	<p>Grade 7: (25) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:</p> <p>(A) draws conclusions and summarizes or paraphrases the findings in a systematic way;</p> <p>(B) marshals evidence to explain the topic and gives relevant reasons for conclusions;</p> <p>(C) presents the findings in a meaningful format; and</p>	<p>3. Multiple Perspectives (MP) include the consideration of other, diverse points of view in order to deepen one's understanding of a discipline or field of study. Examples of skills that promote this dimension include identifying points of view, recognizing the values and beliefs that influence individuals' and groups' perspectives on issues, distinguishing between statements that can be proven and statements that reflect personal beliefs or judgments, and reevaluating personal viewpoints in relation to others.</p> <p>4. Research (R) is the inquiry</p>	<p>Math</p> <p>(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;</p> <p>(E) create and use representations to organize, record, and communicate mathematical ideas;</p> <p>(F) analyze mathematical relationships to connect and</p>	<p>Cross-Disciplinary Standards:</p> <p>I.B.2. Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions.</p> <p>I.D.4. Persevere to complete and master tasks.</p> <p>II.B.1. Write clearly and coherently using standard writing conventions.</p> <p>II.B.2. Write in a variety of forms for various audiences and purposes.</p> <p>II.B.3. Compose and revise drafts.</p> <p>II.C.6. Design and present an effective product.</p> <p>II.C.7. Integrate source material.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
	<p>(D) follows accepted formats for integrating quotations and citations into the written text to maintain a flow of ideas.</p> <p>Grade 8: (25) <i>Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:</i></p> <p>(A) draws conclusions and summarizes or paraphrases the findings in a systematic way;</p> <p>(B) marshals evidence to explain the topic and gives relevant reasons for conclusions;</p> <p>(C) presents the findings in a meaningful format; and</p> <p>(D) follows accepted formats for integrating quotations and citations into the written text to maintain a flow of ideas.</p> <p>Grade 9: (23) <i>Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the</i></p>	<p>process used in the discipline. Steps in the PSP research process include the following:</p> <ul style="list-style-type: none"> Defining the research problem Reviewing quality sources of information Refining the research question(s) Developing the research design Carrying out the research design Analyzing the results Reporting the findings through a product and/or presentation <p>5. Communication (C) is the use of appropriate written, spoken, and technological media to convey new learning in the discipline. Additionally, students should appropriately use the vocabulary of the discipline studied. Students learn strategies to relate complex understandings to everyday situations and to tailor their messages to the particular needs of the audience.</p> <p>6. Presentation of Learning (PL) is the coherence of a student's presentation of new learning. Presentation of learning includes evidence of the student's planning and reasoning. Also evident are clarity of expression and support of assertions with relevant details.</p>	<p>communicate mathematical ideas; [and] (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</p> <p>(2) Number and operations. The student applies mathematical process standards to represent and use rational 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 rational numbers.</p> <p>(3) Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to:</p> <p>(B) apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.</p> <p>Science (2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations.</p>	<p>II.C.8. Present final product.</p> <p>II.D.3. Present analyzed data and communicate findings in a variety of formats.</p> <p>II.F.3. Use technology to communicate and display findings in a clear and coherent manner.</p>



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
<p>Sources for Research Process Categories: Grade 8 <i>Guide to Success</i>, Grade 8 TPSP Scoring Dimensions, and English Language Arts and Reading TEKS</p>	<p>research into a written or an oral presentation that:</p> <ul style="list-style-type: none"> (A) marshals evidence in support of a clear thesis statement and related claims; (B) provides an analysis for the audience that reflects a logical progression of ideas and a clearly stated point of view; (C) uses graphics and illustrations to help explain concepts where appropriate; (D) uses a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research; and (E) uses a style manual (e.g., <i>Modern Language Association, Chicago Manual of Style</i>) to document sources and format written materials. 		<p>The student is expected to:</p> <ul style="list-style-type: none"> (E) analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends. <p>(3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists.</p> <p>The student is expected to:</p> <ul style="list-style-type: none"> (A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student; (B) use models to represent aspects of the natural world such as human body systems, and plant and animal cells; (C) identify advantages and limitations of models such as size, scale, properties, and materials; and (D) relate the impact of research on scientific thought and society, 	



Research Process	English Language Arts and Reading TEKS (includes above grade level standards)	Texas Performance Standards Project Scoring Dimensions	Foundation Area TEKS (Math, Science, and Social Studies)	Texas College and Career Readiness Standards (CCRS)
			<p>including the history of science and contributions of scientists as related to the content.</p> <p>Social Studies (22) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:</p> <ul style="list-style-type: none">(A) use social studies terminology correctly;(B) use standard grammar, spelling, sentence structure, and punctuation;(C) transfer information from one medium to another, including written to visual and statistical to written or visual, using computer software as appropriate; and(D) create written, oral, and visual presentations of social studies information.	