



TEXAS FARM BUREAU®

National Ag in the Classroom Lesson Matrix

TEKS Alignment: 6th Grade – 8th Grade

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A CHILLING INVESTIGATION

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;



- 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 112.18.b.4.B: use preventative 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.
- 7th Grade:
- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and
 - 112.19.b.4.B: use preventative 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.
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrometers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 112.20.b.4.B: use preventative 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.
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;



A RECIPE FOR GENETICS: SELECTIVE BREEDING AND TRANSGENICS

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
- Science
 - 7th Grade:
 - 112.19.b.11: Organisms and environments. The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to:
 - 112.19.b.11.C: identify some changes in genetic traits that have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (*Geospiza fortis*) or domestic animals and hybrid plants.
 - 112.19.b.14: Organisms and environments. The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. The student is expected to:



- 112.19.b.14.C: recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus.
- Social Studies
 - 6th Grade:
 - 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.19: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.18.b.19.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps; and
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.A: compare types and uses of technology, past and present;
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:



- 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
- 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

AGRITOURISM: EXTREME FARM MAKEOVER

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;



- 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
- 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:



- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- Social Studies
 - 6th Grade:
 - 113.18.b.8: Economics. The student understands categories of economic activities and the data used to measure a society's economic level. The student is expected to:
 - 113.18.b.8.A: define and give examples of agricultural, retail, manufacturing (goods), and service industries; and
 - 113.18.b.19: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.18.b.19.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps; and
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;



- 113.18.b.21.D: create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies based on research; and
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 7th Grade:
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 8th Grade:
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.



APPLYING HEREDITY CONCEPTS

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:
 - 110.22.b.2.B: use context such as definition, analogy, and examples to clarify the meaning of words; and
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.H: synthesize information to create new understanding; and

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:
 - 110.23.b.2.B: use context such as contrast or cause and effect to clarify the meaning of words; and



- 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.H: synthesize information to create new understanding; and
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
 - 110.24.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:
 - 110.24.b.2.B: use context within or beyond a paragraph to clarify the meaning of unfamiliar or ambiguous words; and
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.H: synthesize information to create new understanding; and
- Science
 - 7th Grade:
 - 112.19.b.11: Organisms and environments. The student knows that populations and species demonstrate variation and inherit many of their



unique traits through gradual processes over many generations. The student is expected to:

- 112.19.b.11.C: identify some changes in genetic traits that have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (*Geospiza fortis*) or domestic animals and hybrid plants.
 - 112.19.b.14: Organisms and environments. The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. The student is expected to:
 - 112.19.b.14.A: define heredity as the passage of genetic instructions from one generation to the next generation;
 - 112.19.b.14.C: recognize that inherited traits of individuals are governed in the genetic material found in the genes within chromosomes in the nucleus.
- Social Studies
 - 6th Grade:
 - 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.A: compare types and uses of technology, past and present;
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;



- 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

BLUE'S THE CLUE: SOURING MILK FOR SCIENCE

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions,



- formulating testable hypotheses, and using appropriate equipment and technology;
- 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
- 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators,



computers, spectrometers, timing devices, and other necessary equipment to collect, record, and analyze information; and

- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
- Career Development
 - Investigating Careers:
 - 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;

CAN WE HAVE TOO MUCH OF A GOOD THING?

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.22.b.10.B: develop drafts into a focused, structured, and coherent piece of writing by:
 - 110.22.b.10.B.i: organizing with purposeful structure, including an introduction, transitions, coherence within and across paragraphs, and a conclusion;
 - 110.22.b.10.C: revise drafts for clarity, development, organization, style, word choice, and sentence variety;
 - 110.22.b.10.D: edit drafts using standard English conventions, including:



- 110.22.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.22.b.10.D.ii: consistent, appropriate use of verb tenses;
 - 110.22.b.10.D.iii: conjunctive adverbs;
 - 110.22.b.10.D.iv: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.22.b.10.D.v: pronouns, including relative;
 - 110.22.b.10.D.vi: subordinating conjunctions to form complex sentences and correlative conjunctions such as either/or and neither/nor;
 - 110.22.b.10.D.vii: capitalization of proper nouns, including abbreviations, initials, acronyms, and organizations;
 - 110.22.b.10.D.viii: punctuation marks, including commas in complex sentences, transitions, and introductory elements; and
 - 110.22.b.10.D.ix: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;
- 110.22.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.22.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.G: differentiate between paraphrasing and plagiarism when using source materials;
 - 110.22.b.12.I: display academic citations and use source materials ethically;
- 7th Grade:



- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.22.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.23.b.10.B: develop drafts into a focused, structured, and coherent piece of writing by:
 - 110.23.b.10.B.i: organizing with purposeful structure, including an introduction, transitions, coherence within and across paragraphs, and a conclusion;
 - 110.23.b.10.C: revise drafts for clarity, development, organization, style, word choice, and sentence variety;
 - 110.23.b.10.D: edit drafts using standard English conventions, including:
 - 110.23.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.23.b.10.D.ii: consistent, appropriate use of verb tenses;
 - 110.23.b.10.D.iii: conjunctive adverbs;
 - 110.23.b.10.D.iv: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.23.b.10.D.v: pronoun-antecedent agreement;
 - 110.23.b.10.D.vi: subordinating conjunctions to form complex sentences and correlative conjunctions such as either/or and neither/nor;
 - 110.23.b.10.D.vii: correct capitalization;
 - 110.23.b.10.D.viii: punctuation, including commas to set off words, phrases, and clauses, and semicolons; and
 - 110.23.b.10.D.ix: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;



- 110.23.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.23.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.G: differentiate between paraphrasing and plagiarism when using source materials;
 - 110.23.b.12.I: display academic citations and use source materials ethically;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.24.b.10.B: develop drafts into a focused, structured, and coherent piece of writing by:
 - 110.24.b.10.B.i: organizing with purposeful structure, including an introduction, transitions, coherence within and across paragraphs, and a conclusion;
 - 110.24.b.10.C: revise drafts for clarity, development, organization, style, word choice, and sentence variety;



- 110.24.b.10.D: edit drafts using standard English conventions, including:
 - 110.24.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.24.b.10.D.ii: consistent, appropriate use of verb tenses and active and passive voice;
 - 110.24.b.10.D.iii: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.24.b.10.D.iv: pronoun-antecedent agreement;
 - 110.24.b.10.D.v: correct capitalization;
 - 110.24.b.10.D.vi: punctuation, including commas in nonrestrictive phrases and clauses, semicolons, colons, and parentheses; and
 - 110.24.b.10.D.vii: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;
- 110.24.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.24.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.G: differentiate between paraphrasing and plagiarism when using source materials;
 - 110.24.b.12.I: display academic citations and use source materials ethically;
- Science
 - 6th Grade:



- 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
- 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and

○ 8th Grade:

- 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other necessary equipment to collect, record, and analyze information; and

• Social Studies

○ 6th Grade:

- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;

CHAIN OF FOOD

• English Language Arts

○ 6th Grade:



- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
- 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- Social Studies
 - 6th Grade:
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 8th Grade:
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- Career Development
 - Investigating Careers:
 - 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;



CLOTHES ON THE GROW

- English Language Arts
 - 6th Grade:
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
 - 7th Grade:
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.23.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
 - 8th Grade:
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:



- 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- Social Studies
 - 6th Grade:



- 113.18.b.20: Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:
 - 113.18.b.20.A: answer geographic questions, including: Where is it located? Why is it there? What is significant about its location? How is its location related to the location of other people, places, and environments? Using latitude and longitude, where is it located?;
- Career Development
 - Investigating Careers:
 - 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;

CROP CASE FILES: DICHOTOMOUS KEYS

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student



develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

• Science

○ 6th Grade:

- 112.18.b.12: Organisms and environments. The student knows all organisms are classified into domains and kingdoms. Organisms within these taxonomic groups share similar characteristics that allow them to interact with the living and nonliving parts of their ecosystem. The student is expected to:
 - 112.18.b.112.C: recognize that the broadest taxonomic classification of living organisms is divided into currently recognized domains;



- 7th Grade:
 - 112.19.b.11: Organisms and environments. The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to:
 - 112.19.b.11.A: examine organisms or their structures such as insects or leaves and use dichotomous keys for identification;
- 8th Grade:
 - 112.20.b.11: Organisms and environments. The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. The student is expected to:
 - 112.20.b.11.A: investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition;
 - 112.20.b.11.B: explore how short- and long-term environmental changes affect organisms and traits in subsequent populations;

CROSSED UP!

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.



- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions,



- formulating testable hypotheses, and using appropriate equipment and technology;
- 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
- 112.19.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
- 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:



- 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrometers, timing devices, and other necessary equipment to collect, record, and analyze information; and
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;

DIGGING INTO NUTRIENTS

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly



challenging variety of sources that are read, heard, or viewed. The student is expected to:

- 110.22.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
- 110.22.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

○ 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
- 110.23.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.23.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.23.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues



- 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.G: evaluate details read to determine key ideas;
- 110.24.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.24.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.24.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;

DNA: EXPRESSIONS IN AGRICULTURE

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:



- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information;
 - 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:



- 112.19.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information;
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other necessary equipment to collect, record, and analyze information;
- Career Development
 - Investigating Careers:
 - 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;



DRONES IN HIGH-TECH FARMING

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.22.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.22.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.23.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.23.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- 8th Grade:
- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to



both develop and deepen comprehension of increasingly complex texts.

The student is expected to:

- 110.24.b.5.G: evaluate details read to determine key ideas;
- 110.24.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.24.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.24.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- Social Studies
 - 6th Grade:
 - 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The



student is expected to use problem-solving and decision-making processes 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.

- 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

ENERGY BAR EXPLORATION

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 8th Grade:



- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.21.D: create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies based on research;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 8th Grade:
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established



research methodologies from a variety of valid sources, including technology. The student is expected to:

- 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
- 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- Career Development
 - Investigating Careers:
 - 127.2.c.2: The student investigates career pathways in one or more of the 16 career clusters. The student is expected to:
 - 127.2.c.2.C: describe the technical-skill requirements for careers.
 - College and Career Readiness
 - 127.3.c.3: The student evaluates skills for personal success. The student is expected to:
 - 127.3.c.3.A: use interpersonal skills to facilitate effective teamwork;

FARM-TO-FORK IN AUGMENTED REALITY

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;



- 110.22.b.12.D: identify and gather relevant information from a variety of sources;
- 110.22.b.12.F: synthesize information from a variety of sources;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;



FLOWER POWER

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.5.H: synthesize information to create new understanding;
 - 110.22.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.22.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.22.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

- 7th Grade:



- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.23.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.5.H: synthesize information to create new understanding;
- 110.23.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.23.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.23.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;



- 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
 - 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.G: evaluate details read to determine key ideas;
 - 110.24.b.5.H: synthesize information to create new understanding;
 - 110.24.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.24.b.6.D: paraphrase and summarize texts in ways that maintain meaning and logical order;
 - 110.24.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- Science
 - 7th Grade:
 - 112.19.b.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:
 - 112.19.b.3.B: use models to represent aspects of the natural world such as human body systems and plant and animal cells;



FOODMASTER MIDDLE: CHEESE

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.5.H: synthesize information to create new understanding;
 - 110.22.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.22.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.



- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.5.H: synthesize information to create new understanding;
- 110.23.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.23.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
- 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.G: evaluate details read to determine key ideas;
 - 110.24.b.5.H: synthesize information to create new understanding;
- 110.24.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.24.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

- Math



- 6th Grade:
 - 111.26.b.3: Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:
 - 111.26.b.3.D: add, subtract, multiply, and divide integers fluently; and
 - 111.26.b.3.E: multiply and divide positive rational numbers fluently.
 - 111.26.b.4: Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:
 - 111.26.b.4.H: convert units within a measurement system, including the use of proportions and unit rates.
- 7th Grade:
 - 111.27.b.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:
 - 111.27.b.3.A: add, subtract, multiply, and divide rational numbers fluently; and
 - 111.27.b.3.B: apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.
 - 111.27.b.4: Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:
 - 111.27.b.4.E: convert between measurement systems, including the use of proportions and the use of unit rates.
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;



- 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 112.18.b.4.B: use preventative 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.
- 7th Grade:
- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.



- 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and
 - 112.19.b.4.B: use preventative 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.
- 112.19.b.6: Matter and energy. The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. The student is expected to
 - 112.19.b.6.A: distinguish between physical and chemical changes in matter.
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:



- 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrometers, timing devices, and other necessary equipment to collect, record, and analyze information; and
- 112.20.b.4.B: use preventative 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.

FOODMASTER MIDDLE: FRUITS

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.5.H: synthesize information to create new understanding;
 - 110.22.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.22.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

- 7th Grade:



- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.5.H: synthesize information to create new understanding;
- 110.23.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.23.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to



both develop and deepen comprehension of increasingly complex texts.

The student is expected to:

- 110.24.b.5.G: evaluate details read to determine key ideas;
- 110.24.b.5.H: synthesize information to create new understanding;
- 110.24.b.6: Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:
 - 110.24.b.6.E: interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
 - 112.18.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.18.b.4.A: use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 112.18.b.4.B: use preventative 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.

○ 7th Grade:

- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.19.b.4: Science investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.19.b.4.A: use appropriate tools, including life science models, hand lenses, 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 necessary equipment to collect, record, and analyze information; and
 - 112.19.b.4.B: use preventative 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.
- 112.19.b.6: Matter and energy. The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. The student is expected to
 - 112.19.b.6.A: distinguish between physical and chemical changes in matter.

○ 8th Grade:



- 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 112.20.b.4: Scientific investigation and reasoning. The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - 112.20.b.4.A: use appropriate tools, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectrosopes, timing devices, and other necessary equipment to collect, record, and analyze information; and
 - 112.20.b.4.B: use preventative 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.

FOOD SCIENTIST FOR A DAY

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate,



volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and

- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
- 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- Social Studies
 - 6th Grade:
 - 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.22.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 7th Grade:
 - 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;
 - 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
- Career Development
 - Investigating Careers:



- 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;
- 127.2.c.2: The student investigates career pathways in one or more of the 16 career clusters. The student is expected to:
 - 127.2.c.2.C: describe the technical-skill requirements for careers.

FOOD SYSTEMS FEED THE WORLD

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.22.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.23.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a



clear controlling idea or thesis statement and genre characteristics and craft;

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.24.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;

• Social Studies

○ 6th Grade:

- 113.18.b.3: Geography. The student understands the factors that influence the locations and characteristics of locations of various contemporary societies on maps and/or globes. The student is expected to:
 - 113.18.b.3.D: identify the location of major world countries for each of the world regions.
- 113.18.b.5: Geography. The student understands the impact of interactions between people and the physical environment on the development and conditions of places and regions. The student is expected to:
 - 113.18.b.5.A: describe ways people have been impacted by physical processes such as earthquakes and climate;
- 113.18.b.19: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.18.b.19.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps; and



- 113.18.b.20: Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:
 - 113.18.b.20.C: compare various world regions and countries using data from maps, graphs, and charts; and
- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
- 7th Grade:
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
- 8th Grade:
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;

FROM FORAGING TO FARMING

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is



expected to adjust fluency when reading grade-level text based on the reading purpose.

- 110.22.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
- 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.5.H: synthesize information to create new understanding;
- 110.22.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.22.b.10.D: edit drafts using standard English conventions, including:
 - 110.22.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.22.b.10.D.ii: consistent, appropriate use of verb tenses;
 - 110.22.b.10.D.iii: conjunctive adverbs;
 - 110.22.b.10.D.iv: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.22.b.10.D.v: pronouns, including relative;
 - 110.22.b.10.D.vi: subordinating conjunctions to form complex sentences and correlative conjunctions such as either/or and neither/nor;
 - 110.22.b.10.D.vii: capitalization of proper nouns, including abbreviations, initials, acronyms, and organizations;
 - 110.22.b.10.D.viii: punctuation marks, including commas in complex sentences, transitions, and introductory elements; and
 - 110.22.b.10.D.ix: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;



- 110.22.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.22.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.23.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.
 - 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.5.H: synthesize information to create new understanding;
 - 110.22.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.23.b.10.D: edit drafts using standard English conventions, including:



- 110.23.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.23.b.10.D.ii: consistent, appropriate use of verb tenses;
 - 110.23.b.10.D.iii: conjunctive adverbs;
 - 110.23.b.10.D.iv: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.23.b.10.D.v: pronoun-antecedent agreement;
 - 110.23.b.10.D.vi: subordinating conjunctions to form complex sentences and correlative conjunctions such as either/or and neither/nor;
 - 110.23.b.10.D.vii: correct capitalization;
 - 110.23.b.10.D.viii: punctuation, including commas to set off words, phrases, and clauses, and semicolons; and
 - 110.23.b.10.D.ix: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;
- 110.23.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.23.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.24.b.4: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading.



The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.

- 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts.

The student is expected to:

- 110.24.b.5.G: evaluate details read to determine key ideas;
- 110.24.b.5.H: synthesize information to create new understanding;
- 110.24.b.10: Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:
 - 110.24.b.10.D: edit drafts using standard English conventions, including:
 - 110.24.b.10.D.i: complete complex sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;
 - 110.24.b.10.D.ii: consistent, appropriate use of verb tenses and active and passive voice;
 - 110.24.b.10.D.iii: prepositions and prepositional phrases and their influence on subject-verb agreement;
 - 110.24.b.10.D.iv: pronoun-antecedent agreement;
 - 110.24.b.10.D.v: correct capitalization;
 - 110.24.b.10.D.vi: punctuation, including commas in nonrestrictive phrases and clauses, semicolons, colons, and parentheses; and
 - 110.24.b.10.D.vii: correct spelling, including commonly confused terms such as its/it's, affect/effect, there/their/they're, and to/two/too;
- 110.24.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.24.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;

- Science



- 8th Grade:
 - 112.20.b.11: Organisms and environments. The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. The student is expected to:
 - 112.20.b.11.A: investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition;
- Social Studies
 - 6th Grade:
 - 113.18.b.20: Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:
 - 113.18.b.20.A: answer geographic questions, including: Where is it located? Why is it there? What is significant about its location? How is its location related to the location of other people, places, and environments? Using latitude and longitude, where is it located?;
 - 113.18.b.20.B: pose and answer questions about geographic distributions and patterns for various world regions and countries shown on maps, graphs, and charts;
 - 113.18.b.20.C: compare various world regions and countries using data from maps, graphs, and charts;

FUNGI MULTIPLICATION

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term



and sustained recursive inquiry processes for a variety of purposes. The student is expected to:

- 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
- 110.22.b.12.B: develop and revise a plan;
- 110.22.b.12.D: identify and gather relevant information from a variety of sources;
- 110.22.b.12.F: synthesize information from a variety of sources;
- 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

○ 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.B: develop and revise a plan;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term



and sustained recursive inquiry processes for a variety of purposes. The student is expected to:

- 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
- 110.24.b.12.B: develop and revise a plan;
- 110.24.b.12.D: identify and gather relevant information from a variety of sources;
- 110.24.b.12.F: synthesize information from a variety of sources;
- 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

- Science

- 6th Grade:

- 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.

- 7th Grade:

- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.

- 8th Grade:

- 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;



- 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.

GEOGRAPHY AND CLIMATE FOR AGRICULTURAL LANDSCAPES

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;



- 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources
- Social Studies
 - 6th Grade:
 - 113.18.b.4: Geography. The student understands how geographic factors influence the economic development and political relationships of societies. The student is expected to:
 - 113.18.b.4.A: explain the geographic factors responsible for the location of economic activities in places and regions; and
 - 113.18.b.20: Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:
 - 113.18.b.20.A: answer geographic questions, including: Where is it located? Why is it there? What is significant about its location? How is its location related to the location of other people, places, and environments? Using latitude and longitude, where is it located?;
 - 113.18.b.20.C: compare various world regions and countries using data from maps, graphs, and charts; and
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;



- 7th Grade:
 - 113.19.b.8: Geography. The student understands the location and characteristics of places and regions of Texas. The student is expected to:
 - 113.19.b.8.C: analyze the effects of physical and human factors such as climate, weather, landforms, irrigation, transportation, and communication on major events in Texas.
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
- 8th Grade:
 - 113.20.b.11: Geography. The student understands the physical characteristics of North America and how humans adapted to and modified the environment through the mid-19th century. The student is expected to:
 - 113.20.b.11.A: analyze how physical characteristics of the environment influenced population distribution, settlement patterns, and economic activities in the United States; and
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps

GOOD GUYS OR BAD GUYS?

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;



- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
- 110.22.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.22.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.23.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre



characteristics and craft to compose multiple texts that are meaningful.

The student is expected to:

- 110.24.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;

- Science

- 6th Grade:

- 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:

- 112.18.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;

- 7th Grade:

- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:

- 112.19.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;

- 8th Grade:

- 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:

- 112.20.b.2.B: design and implement experimental investigations by making observations, asking well defined questions, formulating testable hypotheses, and using appropriate equipment and technology;



- 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.D: create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies based on research;

HIGH-TECH FARMING

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student



develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
- 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

• Social Studies

○ 6th Grade:

- 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:



- 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.19: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.18.b.19.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 7th Grade:
- 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.A: compare types and uses of technology, past and present;
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.



- 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
 - 113.20.b.28: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on daily life in the United States. The student is expected to:
 - 113.20.b.28.B: identify examples of how industrialization changed life in the United States.
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- Career Development
 - Investigating Careers:
 - 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;
 - 127.2.c.2: The student investigates career pathways in one or more of the 16 career clusters. The student is expected to:
 - 127.2.c.2.C: describe the technical-skill requirements for careers.

HIGH-TECH FOOD

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student



develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.

○ 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.

○ 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.

• Social Studies

○ 6th Grade:

- 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;

• Career Development

○ Investigating Careers:

- 127.2.c.1: The student investigates one or more careers within the 16 career clusters. The student is expected to:
 - 127.2.c.1.A: identify the various career opportunities within one or more career clusters;



HOW MUCH IS DIRT WORTH?

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.

- 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:

- 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.

- Math

- 6th Grade:

- 111.26.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

- 111.26.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.26.b.1.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;

- 111.26.b.3: Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:



- 111.26.b.3.D: add, subtract, multiply, and divide integers fluently;
- 111.26.b.3.E: multiply and divide positive rational numbers fluently.
- 7th Grade:
 - 111.27.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.27.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.27.b.1.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;
 - 111.27.b.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:
 - 111.27.b.3.A: add, subtract, multiply, and divide rational numbers fluently; and
 - 111.27.b.3.B: apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.
- 8th Grade:
 - 111.28.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.28.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.28.b.1.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;

HUNGER AND MALNUTRITION

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
- Social Studies
 - 6th Grade:
 - 113.18.b.2: History. The student understands the influences of individuals and groups from various cultures on various historical and contemporary societies. The student is expected to:
 - 113.18.b.2.A: identify and describe the historical influence of individuals or groups on various contemporary societies;
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

○ 8th Grade:

- 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

INCREASING FOOD PRODUCTION WITH PRECISION AGRICULTURE

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.

- 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.

- Math

- 6th Grade:

- 111.26.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:



- 111.26.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.26.b.1.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;
 - 111.26.b.3: Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:
 - 111.26.b.3.D: add, subtract, multiply, and divide integers fluently;
- 7th Grade:
 - 111.27.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.27.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.27.b.1.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;
 - 111.27.b.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:
 - 111.27.b.3.A: add, subtract, multiply, and divide rational numbers fluently; and
 - 111.27.b.3.B: apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.
- 8th Grade:
 - 111.28.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.28.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.28.b.1.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;

- Social Studies

- 6th Grade:

- 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

- 7th Grade:

- 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.A: compare types and uses of technology, past and present;
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

- 8th Grade:

- 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:



- 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
- 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

INHERITED TRAITS IN THE LIVING CORN NECKLACE

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.22.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:



- 110.23.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.11: Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:
 - 110.24.b.11.B: compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
- Science
 - 6th Grade:
 - 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
 - 7th Grade:
 - 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.19.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;



- 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
 - 112.19.b.11: Organisms and environments. The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to:
 - 112.19.b.11.B: explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb;
 - 112.19.b.14: Organisms and environments. The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. The student is expected to:
 - 112.19.b.14.B: compare the results of uniform or diverse offspring from asexual or sexual reproduction;
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.D: construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and
- Social Studies
 - 6th Grade:
 - 113.18.b.19: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.18.b.19.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;



- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.D: create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies based on research;
- 7th Grade:
 - 113.19.b.20: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.19.b.20.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;
- 8th Grade:
 - 113.20.b.29: Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - 113.20.b.29.C: organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;

LEARN, PROTECT, AND PROMOTE WATER!

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;



- 110.22.b.12.D: identify and gather relevant information from a variety of sources;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
- Science
 - 7th Grade:



- 112.19.b.8: Earth and space. The student knows that natural events and human activity can impact Earth systems. The student is expected to:
 - 112.19.b.8.C: model the effects of human activity on groundwater and surface water in a watershed.

LET'S VOTE ON IT

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is



expected to adjust fluency when reading grade-level text based on the reading purpose.

- 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:

- 110.23.b.5.G: evaluate details read to determine key ideas;

- 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
- 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.G: evaluate details read to determine key ideas;

- Math

- 6th Grade:

- 111.26.b.12: Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:
 - 111.26.b.12.A: represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;

- Social Studies

- 8th Grade:

- 113.20.b.19: Citizenship. The student understands the rights and responsibilities of citizens of the United States. The student is expected to:
 - 113.20.b.19.C: identify examples of responsible citizenship, including obeying rules and laws, staying informed on public issues, voting, and serving on juries.



MICROBES – THEY'RE EVERYWHERE!

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.22.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.22.b.5.G: evaluate details read to determine key ideas;
 - 110.22.b.5.H: synthesize information to create new understanding;
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:



- 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.
 - 110.23.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.23.b.5.G: evaluate details read to determine key ideas;
 - 110.23.b.5.H: synthesize information to create new understanding;
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:
- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is



expected to adjust fluency when reading grade-level text based on the reading purpose.

- 110.24.b.5: Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:
 - 110.24.b.5.G: evaluate details read to determine key ideas;
 - 110.24.b.5.H: synthesize information to create new understanding;
- 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

- Science

- 6th Grade:

- 112.18.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.18.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.18.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.18.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.

- 7th Grade:

- 112.19.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:



- 112.19.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.19.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.19.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
- 8th Grade:
 - 112.20.b.2: Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations. The student is expected to:
 - 112.20.b.2.A: plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology;
 - 112.20.b.2.C: collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
 - 112.20.b.2.E: analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.

MIX IT UP! FOOD SCIENTIST

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.



- 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:



- 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
- 110.24.b.12.D: identify and gather relevant information from a variety of sources;
- Math
 - 6th Grade:
 - 111.26.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.26.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.26.b.1.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;
 - 111.26.b.3: Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:
 - 111.26.b.3.D: add, subtract, multiply, and divide integers fluently;
 - 111.26.b.3.E: multiply and divide positive rational numbers fluently.
 - 7th Grade:
 - 111.27.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.27.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.27.b.1.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;
 - 111.27.b.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:
 - 111.27.b.3.A: add, subtract, multiply, and divide rational numbers fluently; and
 - 111.27.b.3.B: apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.



- 8th Grade:
 - 111.28.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.28.b.1.A: apply mathematics to problems arising in everyday life, society, and the workplace;
 - 111.28.b.1.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;
- Social Studies
 - 6th Grade:
 - 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 8th Grade:
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- Career Development
 - Investigating Careers:
 - 127.2.c.2: The student investigates career pathways in one or more of the 16 career clusters. The student is expected to:



- 127.2.c.2.C: describe the technical-skill requirements for careers.

PLANT NUTRIENT DEFICIENCIES

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.

- 8th Grade:

- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.3: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student



reads grade-level text with fluency and comprehension. The student is expected to adjust fluency when reading grade-level text based on the reading purpose.

- Science
 - 8th Grade:
 - 112.20.b.11: Organisms and environments. The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. The student is expected to:
 - 112.20.b.11.A: investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition;

ROBOTS IN HIGH-TECH FARMING

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.B: follow and give oral instructions that include multiple action steps;
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 8th Grade:



- 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.B: follow and give complex oral instructions to perform specific tasks, answer questions, or solve problems;
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
- Social Studies
 - 6th Grade:
 - 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
 - 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
 - 7th Grade:
 - 113.19.b.19: Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - 113.19.b.19.A: compare types and uses of technology, past and present;
 - 113.19.b.19.C: analyze the effects of various scientific discoveries and technological innovations on the development of Texas such as advancements in the agricultural, energy, medical, computer, and aerospace industries;
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.



- 8th Grade:
 - 113.20.b.27: Science, technology, and society. The student understands the impact of science and technology on the economic development of the United States. The student is expected to:
 - 113.20.b.27.A: explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, the telegraph, and interchangeable parts;
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

SUPERMARKET SMARTS

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.



- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- Social Studies
 - 6th Grade:



- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
- 113.18.b.22: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 7th Grade:
 - 113.19.b.23: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.
- 8th Grade:
 - 113.20.b.31: Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes 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.

SUPPLY AND DEMAND: WHAT IF?

- English Language Arts
 - 6th Grade:
 - 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:



- 110.22.b.2.A: use print or digital resources to determine the meaning, syllabication, pronunciation, word origin, and part of speech;
 - 110.22.b.2.B: use context such as definition, analogy, and examples to clarify the meaning of words;
- 7th Grade:
 - 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.
 - 110.23.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:
 - 110.23.b.2.A: use print or digital resources to determine the meaning, syllabication, pronunciation, word origin, and part of speech;
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues.
 - 110.24.b.2: Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:
 - 110.24.b.2.A: use print or digital resources to determine the meaning, syllabication, pronunciation, word origin, and part of speech;
 - 110.24.b.2.B: use context within or beyond a paragraph to clarify the meaning of unfamiliar or ambiguous words;
- Math
 - 6th Grade:



- 111.26.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.26.b.1.D: communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;
- 111.26.b.5: Proportionality. The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to:
 - 111.26.b.5.A: represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions;
- 111.26.b.12: Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:
 - 111.26.b.12.A: represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;
- 7th Grade:
 - 111.27.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.27.b.1.D: communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;
- 8th Grade:
 - 111.28.b.1: Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - 111.28.b.1.D: 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;
 - 111.28.b.11: Measurement and data. The student applies mathematical process standards to use statistical procedures to describe data. The student is expected to:
 - 111.28.b.11.A: construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data;
- Social Studies
 - 7th Grade:



- 113.19.b.12: Economics. The student understands the interdependence of the Texas economy with the United States and the world. The student is expected to:
 - 113.19.b.12.B: explain the impact of economic concepts within the free enterprise system such as supply and demand, profit, and world competition on the economy of Texas;

THE COLUMBIAN EXCHANGE OF OLD AND NEW WORLD FOODS

- English Language Arts

- 6th Grade:

- 110.22.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.22.b.1.C: give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - 110.22.b.1.D: participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
 - 110.22.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.22.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.22.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.22.b.12.F: synthesize information from a variety of sources;
 - 110.22.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

- 7th Grade:

- 110.23.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.23.b.1.D: engage in meaningful discourse and provide and accept constructive feedback from others.



- 110.23.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.23.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.23.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.23.b.12.F: synthesize information from a variety of sources;
 - 110.23.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- 8th Grade:
 - 110.24.b.1: Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:
 - 110.24.b.1.D: participate collaboratively in discussions, plan agendas with clear goals and deadlines, set time limits for speakers, take notes, and vote on key issues
 - 110.24.b.12: Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:
 - 110.24.b.12.A: generate student-selected and teacher-guided questions for formal and informal inquiry;
 - 110.24.b.12.D: identify and gather relevant information from a variety of sources;
 - 110.24.b.12.F: synthesize information from a variety of sources;
 - 110.24.b.12.J: use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.
- Social Studies
 - 6th Grade:
 - 113.18.b.3: Geography. The student understands the factors that influence the locations and characteristics of locations of various contemporary societies on maps and/or globes. The student is expected to:
 - 113.18.b.3.D: identify the location of major world countries for each of the world regions.
 - 113.18.b.15: Culture. The student understands relationships that exist among world cultures. The student is expected to:



- 113.18.b.15.B: identify and describe factors that influence cultural change such as improvements in communication, transportation, and economic development;
- 113.18.b.15.D: identify the impact of cultural diffusion on individuals and world societies.
- 113.18.b.18: Science, technology, and society. The student understands the influences of science and technology on contemporary societies. The student is expected to:
 - 113.18.b.18.A: identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;
- 113.18.b.21: Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - 113.18.b.21.C: express ideas orally based on research and experiences;
 - 113.18.b.21.D: create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies based on research;