

Alignment of Texas Pre-Admission Content Test (PACT) Agriculture, Food, and Natural Resources: Grades 6–12 (772) Framework with Texas Essential Knowledge and Skills

This alignment study identifies the Texas Essential Knowledge and Skills that are addressed in whole or in part by each competency of the exam framework. An indication of alignment does not necessarily imply complete congruence of the content of an exam competency with the relevant standard. The information in this document is subject to change if revisions are made to the exam framework. Any changes will fully supersede the information contained in this document.

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
<u>Content Domain I</u>		
FOUNDATIONS OF AGRICULTURAL EDUCATION		
001	Demonstrate an understanding of the Career and Technical Education program.	<p>Grades 6–12:</p> <p>130.2 c 1; 130.3 c 1; 130.4 c 1; 130.5 c 1;</p> <p>130.6 c 1; 130.7 c 1; 130.8 c 1; 130.9 c 1; 130.10 c 1; 130.11 c 1; 130.11 c 1;</p> <p>130.12 c 1 130.25 c 1 The student demonstrates professional standards/employability skills as required by business and industry.</p> <p>130.3 c 8 The student identifies opportunities for involvement in agribusiness professional organizations.</p> <p>130.4 c 3 The student recognizes roles within teams, work units, departments, organizations, inter–organizational systems, and the larger environment.</p> <p>130.4 c 4 The student examines critical aspects of career opportunities in one or more agriculture, food, and natural resources careers.</p>

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
002	Demonstrate an understanding of the integrated program approach and career development in agricultural education.	<p>Grades 6–12:</p> <p>130.2 c 1; 130.3 c 1; 130.4 c 1; 130.5 c 1; 130.6 c 1; 130.7 c 1; 130.8 c 1; 130.9 c 1; 130.10 c 1; 130.11 c 1; 130.12 c 1; 130.15 c 1; 130.16 c 1; 130.17 c 1; 130.18 c 1; 130.19 c 1; 130.20 c 1; 130.21 c 1; 130.22 c 1; 130.23 c 1; 130.24 c 1; 130.25 c 1; 130.26 c 1; 130.27 c 1; 130.28 c 1; 130.29 c 1; 130.30 c 1; 130.31 c 1; 130.32 c 1 The student demonstrates professional standards/employability skills as required by business and industry.</p> <p>130.2 c 2; 130.3 c 2; 130.4 c 2; 130.5 c 3; 130.6 c 2; 130.7 c 2; 130.8 c 2; 130.9 c 2; 130.10 c 5; 130.11 c 2; 130.12 c 2; 130.15 c 2; 130.16 c 2; 130.17 c 2; 130.18 c 2; 130.19 c 2; 130.20 c 2; 130.21 c 2; 130.22 c 2; 130.23 c 2; 130.24 c 2; 130.25 c 2; 130.26 c 2; 130.27 c 2; 130.28 c 2; 130.29 c 2; 130.31 c 2 The student develops a supervised agriculture experience program.</p> <p>130.4 c 4 The student examines critical aspects of career opportunities in one or more agriculture, food, and natural resources careers.</p> <p>130.10 c 2 The student, for at least 40% of instructional time, conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices.</p> <p>130.11 c 3; 130.12 c 3 The student uses instructional time to conduct field and laboratory investigations using safe, environmentally appropriate, and ethical practices in a supervised agriculture experience.</p> <p>130.24 c 7 The student develops scenarios for advances in plant and soil science.</p> <p>130.25 c 3 The student uses scientific methods and equipment during laboratory and field investigations.</p> <p>130.25 c 4 The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom.</p> <p>130.31 c 7 The student demonstrates technical knowledge and skills required to pursue a career in the Agriculture, Food, and Natural Resources Career Cluster.</p> <p>130.31 c 8 The student documents technical knowledge and skills.</p> <p>130.32 c 6 The student participates in an agriculture, food, or natural resources experience.</p>

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
003	Demonstrate an understanding of the history of agricultural science and FFA, and the role of FFA in agricultural education.	<p>Grades 6–12:</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 5 The student analyzes the structure of agriculture, food, and natural resources leadership in organizations.</p> <p>130.2 c 6; 130.3 c 5 The student demonstrates appropriate personal and communication skills.</p> <p>130.4 c 3 The student recognizes roles within teams, work units, departments, organizations, inter–organizational systems, and the larger environment.</p>
004	Demonstrate an understanding of procedures for ensuring safety in the agricultural classroom, laboratory, SAE, and FFA.	<p>Grades 6–12:</p> <p>130.2 c 14 The student safely performs basic power, structural, and technical system skills in agricultural applications.</p> <p>130.8 c 4 The student learns the hazards associated with working in the small animal industry.</p> <p>130.10 c 2; 130.25 c 2 The student, for at least 40% of instructional time, conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices.</p> <p>130.11 c 3 The student uses instructional time to conduct field and laboratory investigations using safe, environmentally appropriate, and ethical practices in a supervised agriculture experience.</p> <p>130.12 c 11 The student analyzes the identification, handling, storing, and disposing of waste and hazardous materials.</p> <p>130.31 c 6 The student develops management skills for agricultural resources.</p> <p>130.31 c 7 The student demonstrates technical knowledge and skills required to pursue a career in the Agriculture, Food, and Natural Resources Career Cluster.</p> <p>130.32 c 4 The student understands and applies proper safety techniques in the workplace.</p>

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Content Domain II		
ANIMAL SCIENCE		
005	Demonstrate an understanding of the classification, anatomy, and physiology of animals.	<p>Grades 6–12:</p> <p>130.2 c 12 The student develops technical knowledge and skills related to animal systems.</p> <p>130.6 c 4 The student knows how to provide proper nutrition using accepted protocols and processes to maintain animal performance.</p> <p>130.7 c 3 The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems.</p> <p>130.7 c 4 The student performs technical skills related to livestock production.</p> <p>130.7 c 5 The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species.</p> <p>130.7 c 6; 130.10 c 10 The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry.</p> <p>130.7 c 7 The student explains animal genetics and reproduction.</p> <p>130.8 c 6 The student knows the care and management requirements for a variety of small animals.</p> <p>130.9 c 6 The student explores the area of animal management as it relates to animal identification, animal characteristics, and behavioral temperament.</p> <p>130.9 c 7 The student investigates the body systems and gains a working knowledge of each system's purpose and functions and how each system is affected by disease.</p> <p>130.10 c 6 The student demonstrates principles related to the human, scientific, and technological dimensions of animal agriculture and the resources necessary for producing domesticated animals.</p> <p>130.10 c 7 The student applies the principles of reproduction and breeding to livestock improvement.</p> <p>130.10 c 9 The student examines and compares animal anatomy and physiology in livestock species.</p>

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
		<p>130.10 c 12 The student defines how an organism grows and how specialized cells, tissues, and organs develop.</p> <p>130.10 c 13 The student demonstrates an understanding of policies and issues in animal science.</p>
006	Demonstrate an understanding of animal production and management.	<p>Grades 6–12:</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 12 The student develops technical knowledge and skills related to animal systems.</p> <p>130.6 c 4 The student knows how to provide proper nutrition using accepted protocols and processes to maintain animal performance.</p> <p>130.6 c 6 The student identifies animal pests and diseases.</p> <p>130.7 c 3 The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems.</p> <p>130.7 c 4 The student performs technical skills related to livestock production.</p> <p>130.7 c 5 The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species.</p> <p>130.7 c 6 The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry.</p> <p>130.7 c 7 The student explains animal genetics and reproduction.</p> <p>130.8 c 3 The student describes the importance of responsible small animal ownership.</p> <p>130.8 c 4 The student learns the hazards associated with working in the small animal industry.</p> <p>130.8 c 6 The student knows the care and management requirements for a variety of small animals.</p>

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		<p>130.9 c 6 The student explores the area of animal management as it relates to animal identification, animal characteristics, and behavioral temperament.</p> <p>130.9 c 7 The student investigates the body systems and gains a working knowledge of each system's purpose and functions and how each system is affected by disease.</p> <p>130.9 c 12 The student determines nutritional requirements for ruminant and non-ruminant animals and communicates the importance of animal nutrition in maintaining a healthy animal.</p> <p>130.10 c 6 The student demonstrates principles related to the human, scientific, and technological dimensions of animal agriculture and the resources necessary for producing domesticated animals.</p> <p>130.10 c 7 The student applies the principles of reproduction and breeding to livestock improvement.</p> <p>130.10 c 11 The student evaluates animal diseases and parasites.</p> <p>130.10 c 13 The student demonstrates an understanding of policies and issues in animal science.</p> <p>130.17 c 10 The student demonstrates concepts related to optimum production.</p>

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Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
007	Demonstrate an understanding of animal genetics and reproduction and principles of genetic engineering and biotechnology.	<p>Grades 6–12:</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 12 The student develops technical knowledge and skills related to animal systems.</p> <p>130.7 c 3 The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems.</p> <p>130.7 c 4 The student performs technical skills related to livestock production.</p> <p>130.7 c 5 The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species.</p> <p>130.7 c 7 The student explains animal genetics and reproduction.</p> <p>130.10 c 6 The student demonstrates principles related to the human, scientific, and technological dimensions of animal agriculture and the resources necessary for producing domesticated animals.</p> <p>130.10 c 7 The student applies the principles of reproduction and breeding to livestock improvement.</p> <p>130.10 c 8 The student applies the principles of molecular genetics and heredity.</p> <p>130.10 c 13 The student demonstrates an understanding of policies and issues in animal science.</p>

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008	Demonstrate an understanding of environmental and facilities management in animal production systems.	<p>Grades 6–12:</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 12 The student develops technical knowledge and skills related to animal systems.</p> <p>130.2 c 13 The student describes the principles of food products and processing systems.</p> <p>130.2 c 15 The student explains the relationship between agriculture, food, and natural resources and the environment.</p> <p>130.7 c 3 The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems.</p> <p>130.7 c 4 The student performs technical skills related to livestock production.</p> <p>130.8 c 3 The student describes the importance of responsible small animal ownership.</p> <p>130.8 c 5 The student evaluates current topics in animal rights and animal welfare.</p> <p>130.8 c 6 The student knows the care and management requirements for a variety of small animals.</p> <p>130.10 c 6 The student demonstrates principles related to the human, scientific, and technological dimensions of animal agriculture and the resources necessary for producing domesticated animals.</p> <p>130.10 c 13 The student demonstrates an understanding of policies and issues in animal science.</p> <p>130.12 c 11 The student analyzes the identification, handling, storing, and disposing of waste and hazardous materials.</p> <p>130.15 c 5 The student identifies procedures and regulations for sanitation and safety in the food industry.</p> <p>130.15 c 6 The student identifies safety and governmental regulations involved in the processing and labeling of foods.</p> <p>130.15 c 7 The student demonstrates an understanding of the trends and issues important to careers in the food science industry by comparing and contrasting issues</p>

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		<p>affecting the food science industry, including biotechnology, employment, safety, environmental, and animal welfare issues.</p> <p>130.15 c 8 The student describes the processing, packaging, quality analysis, and marketing of red meats and their by-products.</p> <p>130.15 c 9 The student describes the processing, packaging, quality analysis, and marketing of eggs, poultry, and fish and their by-products.</p> <p>130.15 c 11 The student describes the processing, packaging, quality analysis, and marketing of milk and dairy products for distribution.</p> <p>130.16 c 4 The student understands consumer satisfaction issues.</p> <p>130.16 c 5 The student understands quality control issues in food processing.</p> <p>130.16 c 6 The student understands marketing considerations for food processing.</p>
<u>Content Domain III</u>		
PLANT AND SOIL SCIENCE		
009	Demonstrate an understanding of soil science.	<p>Grades 6–12:</p> <p>130.11 c 7 The student examines soil erosion as related to agricultural production.</p> <p>130.12 c 10 The student examines soil erosion as related to natural resource management and energy production.</p> <p>130.25 c 6 The student analyzes plant and soil science as it relates to plant and soil relationships affecting the production of food, fiber, and other economic crops.</p> <p>130.25 c 9 The student analyzes soil science as it relates to food and fiber production.</p> <p>130.25 c 12 The student maps the process of soil formation influenced by weathering, including erosion processes due to water, wind, and mechanical factors influenced by climate.</p>

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010	Demonstrate an understanding of the classification, anatomy, and physiology of plants.	<p>Grades 6–12:</p> <p>130.2 c 11 The student develops technical knowledge and skills related to plant systems.</p> <p>130.10 c 12 The student defines how an organism grows and how specialized cells, tissues, and organs develop.</p> <p>130.25 c 16 The student identifies how plants grow and how specialized cells, tissues, and organs develop.</p> <p>130.25 c 19 The student explains the chemistry involved in plants at the cellular level.</p>
011	Demonstrate an understanding of plant genetics, reproduction, and propagation.	<p>Grades 6–12:</p> <p>130.2 c 11 The student develops technical knowledge and skills related to plant systems.</p> <p>130.15 c 7 The student demonstrates an understanding of the trends and issues important to careers in the food science industry by comparing and contrasting issues affecting the food science industry, including biotechnology, employment, safety, environmental, and animal welfare issues.</p> <p>130.23 c 4 The student identifies structures and physiological processes used in plant production.</p> <p>130.24 c 7 The student propagates greenhouse crops.</p> <p>130.25 c 12 The student evaluates components of plant science as they relate to crop production.</p> <p>130.25 c 17 The student diagrams the structure and function of nucleic acids in the mechanism of genetics.</p> <p>130.25 c 18 The student demonstrates skills related to the human, scientific, and technological dimensions of crop production and the resources necessary for producing domesticated plants.</p>

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012	Demonstrate an understanding of crop production and management.	<p>Grades 6–12:</p> <p>130.2 c 9 The student uses information technology tools to access, manage, integrate, and create information related to agriculture, food, and natural resources.</p> <p>130.2 c 11 The student develops technical knowledge and skills related to plant systems.</p> <p>130.10 c 12 The student defines how an organism grows and how specialized cells, tissues, and organs develop.</p> <p>130.11 c 5 The student identifies water use and management in agricultural settings.</p> <p>130.10 c 14 The student discusses livestock harvesting operations.</p> <p>130.15 c 3 The student explains the impact of food science systems.</p> <p>130.15 c 6 The student identifies safety and governmental regulations involved in the processing and labeling of foods.</p> <p>130.15 c 10 The student describes the processing, packaging, quality analysis, and marketing of fruits, nuts and vegetables and their by-products.</p> <p>130.16 c 4 The student understands consumer satisfaction issues.</p> <p>130.16 c 5 The student understands quality control issues in food processing.</p> <p>130.16 c 6 The student understands marketing considerations for food processing.</p> <p>130.25 c 15 The student evaluates components of plant science as they relate to crop production.</p>
013	Demonstrate an understanding of horticultural practices, principles, and methods of greenhouse, nursery, and landscape management, and principles of landscape design.	<p>Grades 6–12:</p> <p>130.2 c 11 The student develops technical knowledge and skills related to plant systems.</p> <p>130.2 c 14 The student safely performs basic power, structural, and technical system skills in agricultural applications.</p> <p>130.2 c 15 The student explains the relationship between agriculture, food, and natural resources and the environment.</p>

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		<p>130.12 c 12 The student learns the processes for producing energy and green products from agricultural, biomass, fossil fuel, wind, solar, and geothermal sources.</p> <p>130.20 c 8 The student knows the management factors of floral enterprises.</p> <p>130.21 c 7 The student performs landscape management services.</p> <p>130.22 c 5 The student identifies and implements common cultural and physiological requirements for cool and warm season turf grass maintenance.</p> <p>130.23 c 3 The student develops technical skills associated with the management and production of horticultural plants.</p> <p>130.23 c 4 The student identifies structures and physiological processes used in plant production.</p> <p>130.23 c 5 The student manages and controls common pests of horticultural plants.</p> <p>130.24 c 3 The student identifies and classifies plants used in greenhouse production.</p> <p>130.24 c 4 The student identifies and investigates different greenhouse structures and construction factors.</p> <p>130.24 c 5 The student identifies and assesses environmental conditions within the greenhouse.</p> <p>130.24 c 6 The student identifies, operates, and maintains greenhouse environmental and mechanical controls.</p> <p>130.24 c 7 The student propagates greenhouse crops.</p> <p>130.24 c 8 The student identifies and investigates greenhouse crop production factors.</p> <p>130.24 c 9 The student investigates pest identification and control methods in the greenhouse environment.</p>
015	Demonstrate an understanding of materials and techniques used in agricultural metal fabrication, construction, and water control systems.	<p>Grades 6–12:</p> <p>130.2 c 14 The student safely performs basic power, structural, and technical system skills in agricultural applications.</p> <p>130.11 c 5 The student identifies water use and management in agricultural settings.</p> <p>130.12 c 8 The student identifies water use and wastewater management.</p>

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		<p>130.21 c 5 The student analyzes the cost and maintenance of tools and equipment used in the landscape industry.</p> <p>130.22 c 7 The student manages turf grass equipment.</p> <p>130.24 c 4 The student identifies and investigates different greenhouse structures and construction factors.</p> <p>130.26 c 3 The student follows operating instructions for tools and equipment to perform a given task.</p> <p>130.26 c 4 The student identifies and performs electrical wiring skills.</p> <p>130.26 c 5 The student performs plumbing skills.</p> <p>130.26 c 6 The student performs concrete construction skills.</p> <p>130.26 c 7 The student performs carpentry skills.</p> <p>130.26 c 8 The student identifies fencing methods.</p> <p>130.26 c 9 The student performs appropriate cold and hot metal techniques.</p> <p>130.26 c 10 The student applies processes relating to assembly of equipment in agricultural systems operations.</p> <p>130.26 c 11 The student plans and performs cost-effective construction techniques.</p> <p>130.27 c 3 The student demonstrates principles of facilities design and fabrication related to agricultural structures.</p> <p>130.27 c 4 The student explores the different types of power systems used in agricultural structures.</p> <p>130.27 c 5 The student constructs agricultural structures using appropriate technology.</p> <p>130.27 c 6 The student demonstrates metal construction techniques related to agricultural design and fabrication of structures.</p> <p>130.28 c 3 The student demonstrates principles of design and fabrication related to agricultural machinery and equipment.</p> <p>130.28 c 4 The student plans, constructs, and maintains fences, corrals, and other agricultural enclosures.</p>

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		<p>130.28 c 5 The student demonstrates construction techniques related to design and fabrication of agricultural equipment.</p> <p>130.28 c 6 The student demonstrates knowledge of laws and regulations related to the construction, design and fabrication of agricultural equipment.</p> <p>130.31 c 6 The student develops management skills for agricultural resources.</p>
<u>Content Domain V</u>		
NATURAL RESOURCES AND ENVIRONMENTAL SCIENCE		
016	Demonstrate an understanding of ecological principles and their relationship to agriculture and the environment.	<p>Grades 6–12:</p> <p>130.2 c 15 The student explains the relationship between agriculture, food, and natural resources and the environment.</p> <p>130.11 c 8 The student explains the effects of natural resource use.</p> <p>130.12 c 4 The student determines and evaluates the importance and scope of energy and natural resources.</p> <p>130.12 c 8 The student identifies water use and wastewater management.</p> <p>130.17 c 6 The student examines natural cycles and ecological concepts.</p> <p>130.18 c 3 The student describes the principles of forestry and woodland ecosystems.</p> <p>130.19 c 3 The student develops an understanding of the rangeland ecosystem.</p> <p>130.25 c 8 The student explains the relationship of biotic and abiotic factors within habitats and ecosystems.</p> <p>130.25 c 20 The student identifies the sources and flow of energy through environmental systems.</p>

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Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
017	Demonstrate an understanding of relationships between agriculture and the environment.	<p>Grades 6–12:</p> <p>130.2 c 15 The student explains the relationship between agriculture, food, and natural resources and the environment.</p> <p>130.8 c 6 The student knows the care and management requirements for a variety of small animals.</p> <p>130.11 c 5 The student identifies water use and management in agricultural settings.</p> <p>130.11 c 6 The student describes air quality associated with agricultural production.</p> <p>130.11 c 7 The student examines soil erosion as related to agricultural production.</p> <p>130.11 c 8 The student explains the effects of natural resource use.</p> <p>130.12 c 4 The student determines and evaluates the importance and scope of energy and natural resources.</p> <p>130.12 c 8 The student identifies water use and wastewater management.</p> <p>130.12 c 9 The student describes air quality associated with natural resource management and energy production.</p> <p>130.12 c 10 The student examines soil erosion as related to natural resource management and energy production.</p> <p>130.12 c 11 The student analyzes the identification, handling, storing, and disposing of waste and hazardous materials.</p>

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
018	Demonstrate an understanding of natural resource management.	<p>Grades 6–12:</p> <p>130.2 c 3 The student analyzes concepts related to global diversity.</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 10 The student uses information technology tools to access, manage, integrate, and create information related to agriculture, food, and natural resources.</p> <p>130.2 c 15 The student explains the relationship between agriculture, food, and natural resources and the environment.</p> <p>130.11 c 4 The student discusses the importance and scope of natural resources.</p> <p>130.11 c 5 The student identifies water use and management in agricultural settings.</p> <p>130.11 c 8 The student explains the effects of natural resource use.</p> <p>130.12 c 4 The student determines and evaluates the importance and scope of energy and natural resources.</p> <p>130.12 c 5 The student analyzes ethical issues related to natural resource management and energy production.</p> <p>130.12 c 6 The student understands the role of natural resource management and energy production policies at the local, state, and national levels.</p> <p>130.12 c 7 The student recognizes the purpose of land use planning for natural resource management and energy production.</p> <p>130.12 c 8 The student identifies water use and wastewater management.</p> <p>130.12 c 12 The student learns the processes for producing energy and green products from agricultural, biomass, fossil fuel, wind, solar, and geothermal sources.</p> <p>130.17 c 3 The student analyzes the importance of wildlife, with an emphasis on use and management.</p> <p>130.17 c 4 The student knows the scientific basis of and applies concepts related to wildlife management.</p> <p>130.17 c 5 The student knows the interrelationship between various aspects of wildlife and outdoor public use management.</p> <p>130.17 c 7 The student applies cartographic skills to natural resource activities.</p>

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		<p>130.17 c 8 The student evaluates planning data by monitoring natural resource status.</p> <p>130.17 c 9 The student analyzes various natural resource enhancement techniques using scientific knowledge.</p> <p>130.18 c 3 The student describes the principles of forestry and woodland ecosystems.</p> <p>130.18 c 4 The student demonstrates forest biometrics skills.</p> <p>130.18 c 5 The student demonstrates knowledge of forest management skills.</p> <p>130.18 c 6 The student identifies softwood and hardwood forest management and use practices.</p> <p>130.18 c 8 The student applies cartographic skills to natural resource activities.</p> <p>130.18 c 4 The student develops an understanding of rangeland as a dynamic, living, and changeable system.</p> <p>130.18 c 5 The student analyzes the biotic and abiotic components of a rangeland.</p> <p>130.18 c 6 The student develops an understanding of the dynamic process of a renewable rangeland resource.</p> <p>130.18 c 7 The student identifies methods of maintaining and improving rangeland for livestock management.</p> <p>130.18 c 8 The student identifies methods of maintaining and improving rangeland for wildlife management.</p> <p>130.18 c 9 The student develops an understanding of rangeland management as it relates to global concerns.</p> <p>130.25 c 10 The student describes the relationship between resources within environmental systems.</p> <p>130.25 c 11 The student describes the origin and use of water in a watershed.</p> <p>130.25 c 13 The student describes the dynamics of a watershed.</p> <p>130.31 c 6 The student develops management skills for agricultural resources.</p>
<p><u>Content Domain VI</u></p> <p>AGRICULTURAL BUSINESS</p>		

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
019	Demonstrate an understanding of agricultural business management and entrepreneurship.	<p>Grades 6–12:</p> <p>130.2 c 3 The student analyzes concepts related to global diversity.</p> <p>130.2 c 4 The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry.</p> <p>130.2 c 6; 130.3 c 5 The student demonstrates appropriate personal and communication skills.</p> <p>130.2 c 8 The student applies problem–solving, mathematical, and organizational skills in order to maintain financial and logistical records.</p> <p>130.2 c 9 The student uses information technology tools to access, manage, integrate, and create information related to agriculture, food, and natural resources.</p> <p>130.4 c 3 The student recognizes roles within teams, work units, departments, organizations, inter–organizational systems, and the larger environment.</p> <p>130.4 c 5 The student defines and examines agribusiness management and marketing and its importance to the local and international economy.</p> <p>130.4 c 6 The student defines the importance of maintaining records and budgeting in agribusiness.</p> <p>130.4 c 7 The student describes issues related to government policy and recognizes concepts related to cultural diversity.</p> <p>130.4 c 8 The student defines key issues of agribusiness success and failure.</p> <p>130.4 c 10 The student knows the efficiency aspects of agribusiness management.</p> <p>130.5 c 1 The student demonstrates professional standards/employability skills as required by business and industry.</p> <p>130.7 c 10 The student plans for dynamic changes in business operation.</p> <p>130.23 c 6 The student demonstrates marketing and management skills used in the operation of horticultural businesses.</p> <p>130.24 c 10 The student performs greenhouse management business procedures.</p>

Competencies		Texas Essential Knowledge and Skills
Field 772: TX PACT: Agriculture, Food, and Natural Resources: Grades 6–12		Texas Essential Knowledge and Skills for Career and Technical Education
020	Demonstrate an understanding of principles of economics and their role in agricultural business.	<p>Grades 6–12:</p> <p>130.4 c 5 The student defines and examines agribusiness management and marketing and its importance to the local and international economy.</p> <p>130.4 c 8 The student defines key issues of agribusiness success and failure.</p> <p>130.4 c 10 The student knows the efficiency aspects of agribusiness management.</p> <p>130.7 c 9 The student knows the factors impacting commodity prices and costs.</p> <p>130.7 c 10 The student plans for dynamic changes in business operation.</p>
021	Demonstrate knowledge of agricultural marketing and sales.	<p>Grades 6–12:</p> <p>130.3 c 9 The student identifies opportunities for involvement in agribusiness professional organizations.</p> <p>130.4 c 5 The student defines and examines agribusiness management and marketing and its importance to the local and international economy.</p> <p>130.4 c 6 The student defines the importance of maintaining records and budgeting in agribusiness.</p> <p>130.4 c 8 The student defines key issues of agribusiness success and failure.</p> <p>130.4 c 9 The student describes the marketing of agricultural products.</p> <p>130.7 c 9 The student knows the factors impacting commodity prices and costs.</p> <p>130.7 c 10 The student plans for dynamic changes in business operation.</p> <p>130.10 c 15 The student explores methods of marketing livestock.</p>