

TEKS CORRELATIONS & SUGGESTED PACING GUIDE

Livestock Production



iCEV Agricultural Science Site

Meets 100% of TEKS

Scope & Sequence	Lesson Title	TEKS	Days of Teaching	TEA-Approved IBC Playlist
1	The Livestock Industry	1.B.iv	5	Elanco Fundamentals of Animal Science Certification
2	Global Agriculture: Feeding the World	3.A.i	2	
3	Hot Topics - Animal Welfare	N/A	2	
4	Basic Animal Management	9.A.i; 10.A.ii; 10.A.iii; 10.A.iv; 10.A.v; 10.A.vi	10	
5	Animal ID Systems	4.D.i	6	Elanco Fundamentals of Animal Science Certification
6	Common Animal Diseases	5.B.i; 5.B.ii; 8.A.i; 8.A.ii; 8.A.iii; 8.A.iv; 8.A.v; 8.A.vi; 8.A.vii; 8.A.viii; 8.A.ix; 8.A.x; 8.B.i; 8.B.ii; 8.B.iii	7	Elanco Fundamentals of Animal Science Certification
7	Parasites of Livestock	8.C.i; 8.C.ii; 8.C.iii; 8.C.iv	5	Elanco Fundamentals of Animal Science Certification
8	Basic Livestock Surgical Procedures	4.B.i; 4.B.ii; 4.C.i	5	Elanco Fundamentals of Animal Science Certification
9	Injection Techniques	4.B.i; 4.B.ii; 4.C.i	8	Elanco Fundamentals of Animal Science Certification
10	Nervous, Skeletal & Muscular Systems	5.A.i; 5.A.ii	4	Elanco Veterinary Medical Applications Certification
11	Circulatory & Respiratory Systems	5.A.iii; 5.A.iv	4	Elanco Veterinary Medical Applications Certification
12	Digestive System	N/A	4	Elanco Veterinary Medical Applications Certification
13	Digestive Systems of Livestock: A Basic Look	6.A.i; 6.A.ii	4	Elanco Fundamentals of Animal Science Certification
14	Basic Livestock Nutrition	6.B.i; 6.B.ii; 6.C.i; 6.C.ii; 6.C.iii	5	Elanco Fundamentals of Animal Science Certification
15	Advanced Livestock Nutrition	6.B.i; 6.B.ii; 6.C.i; 6.C.ii; 6.C.iii; 6.D.i; 6.E.i; 6.E.ii; 9.B.i; 10.B.i	14	
16	Antibiotic Use in Livestock	N/A	4	
17	Basic Animal Reproduction	5.A.iv; 7.A.i; 10.B.i	4	
18	Livestock Reproduction	3.B.i; 3.B.ii; 7.D.i; 7.D.ii	6	Elanco Fundamentals of Animal Science Certification
19	Biotechnology: Fetal Programming	3.B.i; 3.B.ii	1	
20	Advanced Animal Genetics	7.B.i; 7.E.i; 7.E.ii	4	
21	Livestock Breeding Systems	4.A.i; 7.B.i; 7.C.i	7	Elanco Fundamentals of Animal Science Certification
22	Performance Bulls - 1 (WITH Officials)	4.A.i	1	
23	Breeding Gilts - 19 (WITH Officials)	4.A.i	1	
24	Biosecurity & Animal Agriculture	N/A	5	
25	Beef Cattle Management Practices	7.A.i	5	Elanco Fundamentals of Animal Science Certification
26	Sheep Management Practices	7.A.i	4	Elanco Fundamentals of Animal Science Certification
27	Swine Management Practices	7.A.i	4	Elanco Fundamentals of Animal Science Certification
28	Goat Management Practices	7.A.i	5	Elanco Fundamentals of Animal Science Certification

Scope & Sequence	Lesson Title	TEKS	Days of Teaching	TEA-Approved IBC Playlist
29	Scientific Procedures & Safety	9.A.i; 10.A.ii; 10.A.iii; 10.A.iv; 10.A.v; 10.A.vi; 10.B.i	8	
30	Government's Role in Agricultural Business	4.E.i	10	
31	Agricultural Business: Financing, Saving & Investing	4.E.i	7	
32	Agricultural Markets: Commodities & Contracts	3.A.i; 9.A.i	7	
33	Ecological Principles	3.C.i	7	Ducks Unlimited Ecology Conservation & Management Certification
34	Environmental Issues: Animal Systems	N/A	5	
35	Hot Topics - Animal Agriculture Greenhouse Gas Emissions	N/A	2	
36	The World of Agriculture	1.B.i; 1.B.ii	12	
37	Career Cluster: Agriculture, Food & Natural Resources	1.A.i; 1.A.ii; 1.F.i	7	
38	Animal Systems	1.A.i; 1.A.ii; 1.B.i; 1.B.ii; 1.B.iii; 1.B.iv	2	
39	Formulas for Career Success: Career Testing & Investigation	1.A.i	8	
40	Internships 101: The Importance of Internships	1.A.i	2	
41	Employability Skills	1.B.iii; 1.B.iv; 1.D.i; 1.D.ii	5	
42	Workplace Issues	1.C.i; 1.C.ii; 1.C.iii; 1.C.iv; 1.D.iii	4	
43	Citizenship Basics	1.E.i	9	
44	Internet Basics	1.F.i	5	
45	Blue & Gold Basics: SAE Programs	2.A.i; 2.A.ii; 2.A.iii; 2.A.iv; 2.A.v; 2.B.i	5	
46	Introduction to Record Keeping	2.B.i	3	
47	Blue & Gold Basics: What is FFA?	2.C.i; 2.D.i; 2.D.ii	6	
48	Blue & Gold Basics: FFA Officers & Meetings	2.C.i	8	
49	Blue & Gold Basics: Career Development Events	2.C.i	2	

* *Days of Teaching* identifies the number of days a lesson may take if all lesson plan items (i.e., activities, projects, handouts, etc.) are utilized as written by iCEV curriculum writers. Flexibility within the lesson plan allows instructor autonomy of implementation for each item.

Correlations to the Texas Essential Knowledge and Skills (TEKS): Student/Teacher Material							
Subject	Chapter 130. Texas Essential Knowledge and Skills for Career & Technical Education						
Subchapter	Subchapter A. Agriculture, Food, And Natural Resources						
Course	§130.7. Livestock Production (One Credit), Adopted 2015.						
Publisher	CEV Multimedia, Ltd.						
Program Title	iCEV Agricultural Science Site						
Program ISBN	9.78161E+12						
TEKS Coverage (%)	100.00%						
(a) General Requirements. This course is recommended for students in Grades 10-12. Students shall be awarded one credit for successful completion of this course.							
(b) Introduction.							
<p>(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.</p> <p>(2) The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</p> <p>(3) In Livestock Production, students will acquire knowledge and skills related to livestock and the livestock production industry. Livestock Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry. To prepare for careers in the field of animal science, students must attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p> <p>(4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.</p> <p>(5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.</p>							
(c) Knowledge and Skills.							
Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	(A) identify career development and entrepreneurship opportunities in the field of animal systems	(i) identify career development opportunities in the field of animal systems	Student/Teacher	Narrative	9781614592082	Career Cluster: Agriculture, Food & Natural Resources	
			Student/Teacher	Activity	9781614592082	Project - Career Comparison; Project - Career Cube; Project - Career Interview; Project - Local Search; Project - The Career for Me	Career Cluster: Agriculture, Food & Natural Resources
			Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Activity	9781614592082	Activity - Career Ranking	Animal Systems
			Student/Teacher	Narrative	9781614592082	Formulas for Career Success; Career Testing & Investigation; Internships 101: The Importance of Internships	

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	(A) identify career development and entrepreneurship opportunities in the field of animal systems	(ii) identify entrepreneurship opportunities in the field of animal systems	Student/Teacher	Narrative	9781614592082	Career Cluster: Agriculture, Food & Natural Resources	
			Student/Teacher	Activity	9781614592082	Project - Entrepreneurial Adventures	Career Cluster: Agriculture, Food & Natural Resources
			Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Activity	9781614592082	Activity - Career Ranking	Animal Systems
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(B) apply competencies related to resources, information, interpersonal skills, and systems of operation in animal systems	(i) apply competencies related to resources in animal systems	Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Narrative	9781614592082	The World of Agriculture	
			Student/Teacher		9781614592082	Activity - Career Opportunities: Activity - Career Opportunities Teacher Instruction Sheet	The World of Agriculture
			Student/Teacher	Activity			
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(B) apply competencies related to resources, information, interpersonal skills, and systems of operation in animal systems	(ii) apply competencies related to information in animal systems	Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Narrative	9781614592082	The World of Agriculture	
			Student/Teacher	Activity	9781614592082	Activity - Career Opportunities; Activity - Career Opportunities Teacher Instruction Sheet	The World of Agriculture
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(B) apply competencies related to resources, information, interpersonal skills, and systems of operation in animal systems	(iii) apply competencies related to interpersonal skills in animal systems	Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Narrative	9781614592082	Employability Skills	
			Student/Teacher	Activity	9781614592082	Activity - Skills Flashcards; Project - Personal Skills	Employability Skills
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(B) apply competencies related to resources, information, interpersonal skills, and systems of operation in animal systems	(iv) apply competencies related to systems of operation in animal systems in animal systems	Student/Teacher	Narrative	9781614592082	Animal Systems	
			Student/Teacher	Narrative	9781614592082	Employability Skills	
			Student/Teacher	Activity	9781614592082	Activity - Skills Flashcards: Project - Personal Skills	Employability Skills
			Student/Teacher	Narrative	9781614592082	The Livestock Industry	
			Student/Teacher	Activity	9781614592082	Project - Livestock Industry Display	The Livestock Industry
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(C) demonstrate knowledge of personal and occupational safety and health practices in the workplace	(i) demonstrate knowledge of personal safety practices in the workplace	Student/Teacher	Narrative	9781614592082	Workplace Issues	
			Student/Teacher	Activity	9781614592082	Activity - Facts & Opinions in Occupational Safety Practices; Activity - Federal Laws for Safety; Project - Creating an Employee Handbook; Project - Determining Health Practices in the Workplace; Project - In Your Own Words: OSHA in the Workplace; Project - Wellness Practices in the Workplace	Workplace Issues
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(C) demonstrate knowledge of personal and occupational safety and health practices in the workplace	(ii) demonstrate knowledge of occupational safety practices in the workplace	Student/Teacher	Narrative	9781614592082	Workplace Issues	
			Student/Teacher	Activity	9781614592082	Activity - Facts & Opinions in Occupational Safety Practices; Activity - Federal Laws for Safety; Project - Creating an Employee Handbook; Project - Determining Health Practices in the Workplace; Project - In Your Own Words: OSHA in the Workplace; Project - Wellness Practices in the Workplace	Workplace Issues
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(C) demonstrate knowledge of personal and occupational safety and health practices in the workplace	(iii) demonstrate knowledge of personal health practices in the work place	Student/Teacher	Narrative	9781614592082	Workplace Issues	
			Student/Teacher	Activity	9781614592082	Activity - Facts & Opinions in Occupational Safety Practices; Activity - Federal Laws for Safety; Project - Creating an Employee Handbook; Project - Determining Health Practices in the Workplace; Project - In Your Own Words: OSHA in the Workplace; Project - Wellness Practices in the Workplace	Workplace Issues
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

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(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(C) demonstrate knowledge of personal and occupational safety and health practices in the workplace	(iv) demonstrate knowledge of personal health practices in the work place	Student/Teacher	Narrative	9781614592082	Workplace Issues	
			Student/Teacher	Activity	9781614592082	Activity - Facts & Opinions in Occupational Safety Practices; Activity - Federal Laws for Safety; Project - Creating an Employee Handbook; Project - Determining Health Practices in the Workplace; Project - In Your Own Words: OSHA in the Workplace; Project - Wellness Practices in the Workplace	Workplace Issues
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(D) identify employers' expectations, including appropriate work habits, ethical conduct, and legal responsibilities	(i) identify employers' expectations including appropriate work habit	Student/Teacher	Narrative	9781614592082	Employability Skills	
			Student/Teacher	Activity	9781614592082	Project - Personal Skills; Activity - Skills Flashcards; Activity - Work Habits: Good vs Bad; Activity - Work Habits: Good vs Bad Answer Key	Employability Skills
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(D) identify employers' expectations, including appropriate work habits, ethical conduct, and legal responsibilities	(ii) identify employers' expectations including ethical conduct	Student/Teacher	Narrative	9781614592082	Employability Skills	
			Student/Teacher	Activity	9781614592082	Project - Personal Skills; Activity - Skills Flashcards; Activity - Work Habits: Good vs Bad; Activity - Work Habits: Good vs Bad Answer Key	Employability Skills
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(D) identify employers' expectations, including appropriate work habits, ethical conduct, and legal responsibilities	(iii) identify employers' expectations including legal responsibilities	Student/Teacher	Narrative	9781614592082	Workplace Issues	
			Student/Teacher	Activity	9781614592082	Project - Negative Choices in the Workplace; Activity - Defining Workplace Policies & Procedures; Student Handout - Employee Rights & Responsibilities in the Workplace; Student Handout - Employer Rights & Responsibilities in the Workplace	Workplace Issues
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(E) demonstrate good citizenship characteristics such as stewardship, advocacy, and community leadership	(i) demonstrate good citizenship characteristics	Student/Teacher	Narrative	9781614592082	Citizenship Basics	
			Student/Teacher	Activity	9781614592082	Activity - Citizenship: What's it to You?: Project - Serving the Community	Citizenship Basics
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(1) The student learns the employability characteristics of a successful employee. The student is expected to:	(F) reseaching career topics using technology such as the Internet	(i) reseaching career topics using technology	Student/Teacher	Narrative	9781614592082	Internet Basics	
			Student/Teacher	Narrative	9781614592082	Career Cluster: Agriculture, Food & Natural Resources	
			Student/Teacher	Activity	9781614592082	Project - The Career for Me	Career Cluster: Agriculture, Food & Natural Resources
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity	(i) plan a supervised agriculture experience program as an experiential learning activity	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Activity - Matching Experiences; Activity - Matching Experiences Answer Key: Activity - Selecting the Appropriate SAE: Activity - Selecting the Appropriate SAE Answer Key: Project - SAE Planning; Project - SAE Planning Contract: Student Handout - Factors for SAE Selection	Blue & Gold Basics: SAE Programs
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity	(ii) propose a supervised agriculture experience program as an experiential learning activity	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Activity - Matching Experiences; Activity - Matching Experiences Answer Key: Activity - Selecting the Appropriate SAE: Activity - Selecting the Appropriate SAE Answer Key: Project - SAE Planning; Project - SAE Planning Contract: Student Handout - Factors for SAE Selection	Blue & Gold Basics: SAE Programs
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity	(iii) conduct a supervised agriculture experience program as an experiential learning activity	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Activity - Matching Experiences; Activity - Matching Experiences Answer Key: Activity - Selecting the Appropriate SAE: Activity - Selecting the Appropriate SAE Answer Key: Project - SAE Planning; Project - SAE Planning Contract: Student Handout - Factors for SAE Selection	Blue & Gold Basics: SAE Programs
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity	(iv) document a supervised agriculture experience program as an experiential learning activity	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Activity - Matching Experiences; Activity - Matching Experiences Answer Key: Activity - Selecting the Appropriate SAE: Activity - Selecting the Appropriate SAE Answer Key: Project - SAE Planning; Project - SAE Planning Contract: Student Handout - Factors for SAE Selection	Blue & Gold Basics: SAE Programs
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity	(v) evaluate a supervised agriculture experience program as an experiential learning activity	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Activity - Matching Experiences; Activity - Matching Experiences Answer Key: Activity - Selecting the Appropriate SAE; Activity - Selecting the Appropriate SAE Answer Key: Project - SAE Planning; Project - SAE Planning Contract: Student Handout - Factors for SAE Selection	Blue & Gold Basics: SAE Programs
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(2) The student develops a supervised agriculture experience program. The student is expected to:	(B) apply proper record-keeping skills as they relate to the supervised agriculture experience	(i) apply proper record-keeping skills as they relate to the supervised agriculture experience	Student/Teacher	Narrative	9781614592082	Introduction to Record Keeping	
			Student/Teacher	Activity	9781614592082	Project - Introduction to Record Keeping	Introduction to Record Keeping
			Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: SAE Programs	
			Student/Teacher	Activity	9781614592082	Project - SAE Planning; Project - SAE Planning Contract	Blue & Gold Basics: SAE Programs

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(2) The student develops a supervised agriculture experience program. The student is expected to:	(C) participate in youth leadership opportunities to create a well-rounded experience program	(i) participate in youth leadership opportunities to create a well-rounded experience program	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: What is FFA?	
			Student/Teacher	Activity	9781614592082	Student Handout - Program of Activities; Activity - Program of Activities; Project - FFA Group Lesson Plan	Blue & Gold Basics: What is FFA?
			Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: FFA Officers & Meetings	
			Student/Teacher	Activity	9781614592082	Activity - FFA Officer Duties; Activity - FFA Officer Duties Answer Key	Blue & Gold Basics: FFA Officers & Meetings
			Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: Career Development Events	
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(2) The student develops a supervised agriculture experience program. The student is expected to:	(D) produce and participate in a local program of activities using a strategic planning process	(i) produce a local program of activities using a strategic planning process	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: What is FFA?	
			Student/Teacher	Activity	9781614592082	Student Handout - Program of Activities; Activity - Program of Activities; Project - FFA Group Lesson Plan	Blue & Gold Basics: What is FFA?
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(2) The student develops a supervised agriculture experience program. The student is expected to:	(D) produce and participate in a local program of activities using a strategic planning process	(ii) participate in a local program of activities using a strategic planning process	Student/Teacher	Narrative	9781614592082	Blue & Gold Basics: What is FFA?	
			Student/Teacher	Activity	9781614592082	Student Handout - Program of Activities; Activity - Program of Activities; Project - FFA Group Lesson Plan	Blue & Gold Basics: What is FFA?
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(3) The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems. The student is expected to:	(A) assess the importance of the United States impact on world commodity markets	(i) assess the importance of the United States impact on world commodity markets	Student/Teacher	Narrative	9781614592082	Agricultural Markets: Commodities & Contracts	
			Student/Teacher	Activity	9781614592082	Project - World Food Markets	Agricultural Markets: Commodities & Contracts
			Student/Teacher	Narrative	9781614592082	Global Agriculture: Feeding the World	
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(3) The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems. The student is expected to:	(B) apply the principles of livestock breeding and nutrition in predicting the impact of current advances in genetics	(i) apply the principles of livestock breeding in predicting the impact of current advances in genetics	Student/Teacher	Narrative	9781614592082	Livestock Reproduction	
			Student/Teacher	Activity	9781614592082	Student Handout - Nutritional Requirements Table; Project - Develop a Breeding Plan	Livestock Reproduction
			Student/Teacher	Narrative	9781614592082	Biotechnology: Fetal Programming	
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(3) The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems. The student is expected to:	(B) apply the principles of livestock breeding and nutrition in predicting the impact of current advances in genetics	(ii) apply the principles of livestock nutrition in predicting the impact of current advances in genetics	Student/Teacher	Narrative	9781614592082	Livestock Reproduction	
			Student/Teacher	Activity	9781614592082	Student Handout - Nutritional Requirements Table: Project - Develop a Breeding Plan	Livestock Reproduction
			Student/Teacher	Narrative	9781614592082	Biotechnology: Fetal Programming	
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(3) The student demonstrates technical skills relating to the interrelated human, scientific, and technological dimensions of animal systems. The student is expected to:	(C) examine the interrelationship of plants and animals such as forage identification, rotational grazing, and grass protein levels	(i) examine the interrelationship of plants and animals	Student/Teacher	Narrative	9781614592082	Ecological Principles	
			Student/Teacher	Activity	9781614592082	Project - Plant & Animal Dynamic	Ecological Principles
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(4) The student performs technical skills related to livestock production. The student is expected to:	(A) gather performance data	(i) gather performance data	Student/Teacher	Narrative	9781614592082	Livestock Breeding Systems	
			Student/Teacher	Activity	9781614592082	Activity - Suffolk Ram Lambs Scenario; Activity - Suffolk Ram Lambs Scenario Answer Key	Livestock Breeding Systems
			Student/Teacher	Narrative	9781614592082	Performance Bulls - 1 (WITH Officials)	Performance Bulls - 1
			Student/Teacher	Narrative	9781614592082	Breeding Gilts - 19 (WITH Officials)	Breeding Gilts - 19
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(4) The student performs technical skills related to livestock production. The student is expected to:	(B) describe common veterinary procedures and skills	(i) describe common veterinary procedures	Student/Teacher	Narrative	9781614592082	Basic Livestock Surgical Procedures	
			Student/Teacher	Activity	9781614592082	Project - Dehorning; Activity - Castration; Activity - Tail Docking, Teeth Clipping & Lancing	Basic Livestock Surgical Procedures
			Student/Teacher	Narrative	9781614592082	Injection Techniques	
			Student/Teacher	Activity	9781614592082	Activity - Injection Table; Activity - Advantages & Disadvantages of Common Livestock Vaccinations; Activity - Injection Techniques	Injection Techniques
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(4) The student performs technical skills related to livestock production. The student is expected to:	(B) describe common veterinary procedures and skills	(ii) describe common veterinary skills	Student/Teacher	Narrative	9781614592082	Basic Livestock Surgical Procedures	
			Student/Teacher	Activity	9781614592082	Project - Dehorning; Activity - Castration; Activity - Tail Docking, Teeth Clipping & Lancing	Basic Livestock Surgical Procedures
			Student/Teacher	Narrative	9781614592082	Injection Techniques	
			Student/Teacher	Activity	9781614592082	Activity - Injection Table; Activity - Advantages & Disadvantages of Common Livestock Vaccinations; Activity - Injection Techniques	Injection Techniques
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(4) The student performs technical skills related to livestock production. The student is expected to:	(C) practice proper animal restraint techniques	(i) practice proper animal restraint techniques	Student/Teacher	Narrative	9781614592082	Basic Livestock Surgical Procedures	
			Student/Teacher	Activity	9781614592082	Project - Dehorning; Activity - Castration; Activity - Tail Docking, Teeth Clipping & Lancing	Basic Livestock Surgical Procedures
			Student/Teacher	Narrative	9781614592082	Injection Techniques	
			Student/Teacher	Activity	9781614592082	Activity - Injection Table; Activity - Advantages & Disadvantages of Common Livestock Vaccinations; Activity - Injection Techniques	Injection Techniques
			Teacher Only				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(4) The student performs technical skills related to livestock production. The student is expected to:	(D) demonstrate identification techniques	(i) demonstrate identification techniques	Student/Teacher	Narrative	9781614592082	Animal ID Systems	
			Student/Teacher	Activity	9781614592082	Project - Animal ID; Activity - Pig Ear Notching; Activity - Pig Ear Notching Answer Key	Animal ID Systems
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(4) The student performs technical skills related to livestock production. The student is expected to:	(E) demonstrate effective management strategies such as financial planning and managing government regulations	(i) demonstrate effective management strategies	Student/Teacher	Narrative	9781614592082	Agricultural Business: Financing, Saving & Investing	
			Student/Teacher	Activity	9781614592082	Student Handout - Financing; Activity - Financing; Activity - Financing Answer Key	Agricultural Business: Financing, Saving & Investing
			Student/Teacher	Narrative	9781614592082	Government's Role in Agricultural Business	
			Student/Teacher	Activity	9781614592082	Activity - Governmental Roles; Activity - Governmental Roles Answer Key; Project - Policies	Government's Role in Agricultural Business
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(A) explain the skeletal, muscular, respiratory, reproductive, and circulatory systems of animals	(i) explain the skeletal system of animals	Student/Teacher	Narrative	9781614592082	Nervous, Skeletal & Muscular Systems	
			Student/Teacher	Activity	9781614592082	Activity - System Outline; Project - Model System	Nervous, Skeletal & Muscular Systems
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(A) explain the skeletal, muscular, respiratory, reproductive, and circulatory systems of animals	(ii) explain the muscular system of animals	Student/Teacher	Narrative	9781614592082	Nervous, Skeletal & Muscular Systems	
			Student/Teacher	Activity	9781614592082	Activity - System Outline: Project - Model System	Nervous, Skeletal & Muscular Systems
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(A) explain the skeletal, muscular, respiratory, reproductive, and circulatory systems of animals	(iii) explain the respiratory system of animals	Student/Teacher	Narrative	9781614592082	Circulatory & Respiratory Systems	
			Student/Teacher	Activity	9781614592082	Activity - System Outline: Project - Model System	Circulatory & Respiratory System
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(A) explain the skeletal, muscular, respiratory, reproductive, and circulatory systems of animals	(iv) explain the reproductive system of animals	Student/Teacher	Narrative	9781614592082	Basic Animal Reproduction	
			Student/Teacher	Activity	9781614592082	Activity - System Outline; Project - Model Systems	Basic Animal Reproduction
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(A) explain the skeletal, muscular, respiratory, reproductive, and circulatory systems of animals	(v) explain the circulatory system of animals	Student/Teacher	Narrative	9781614592082	Circulatory & Respiratory Systems	
			Student/Teacher	Activity	9781614592082	Activity - System Outline; Project - Model System	Circulatory & Respiratory System
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(B) evaluate vital signs and normal behavior	(i) evaluate vital signs	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - What is Normal?	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(5) The student explains anatomy and physiology related to nutrition, reproduction, health, and management of livestock species. The student is expected to:	(B) evaluate vital signs and normal behavior	(ii) evaluate normal behavior	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - What is Normal?	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(A) describe the digestive systems of ruminant and non-ruminant animals	(i) describe the digestive systems of ruminant animals	Student/Teacher	Narrative	9781614592082	Digestive Systems of Livestock: A Basic Look	
			Student/Teacher	Activity	9781614592082	Project - Parts of a Digestive System Teacher Instruction Sheet	Digestive Systems of Livestock: A Basic Look
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(A) describe the digestive systems of ruminant and non-ruminant animals	(ii) describe the digestive systems of non-ruminant animals	Student/Teacher	Narrative	9781614592082	Digestive Systems of Livestock: A Basic Look	
			Student/Teacher	Activity	9781614592082	Project - Parts of a Digestive System Teacher Instruction Sheet	Digestive Systems of Livestock: A Basic Look
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(B) identify sources of nutrients and classes of feed	(i) identify sources of nutrients	Student/Teacher	Narrative	9781614592082	Basic Livestock Nutrition	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Ingredient ID	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(B) identify sources of nutrients and classes of feed	(ii) identify classes of feed	Student/Teacher	Narrative	9781614592082	Basic Livestock Nutrition	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Student/Teacher	Activity	9781614592082	Activity - Ingredient ID	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(C) identify vitamins, minerals, and feed additives	(i) identify vitamins	Student/Teacher	Narrative	9781614592082	Basic Livestock Nutrition	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Ingredient ID	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(C) identify vitamins, minerals, and feed additives	(ii) identify minerals	Student/Teacher	Narrative	9781614592082	Basic Livestock Nutrition	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Ingredient ID	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(C) identify vitamins, minerals, and feed additives	(iii) identify feed additives	Student/Teacher	Narrative	9781614592082	Basic Livestock Nutrition	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Ingredient ID	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(D) formulate rations	(i) formulate rations	Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Formulate a Feed Ration: Activity - Formulate a Feed Ration Answer Key	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(E) discuss feeding practices and feed quality issues	(i) discuss feeding practices	Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Nutrient Requirement Table; Activity - Feeding Scenario	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(6) The student determines nutritional requirements of ruminant and non-ruminant animals, including poultry. The student is expected to:	(E) discuss feeding practices and feed quality issues	(ii) discuss feed quality issues	Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Assessment - IV - Rations, Quality & Feeding Practices of Livestock Animals; Assessment - IV - Rations, Quality & Feeding Practices of Livestock Animals Answer Key	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only				
(7) The student explains animal genetics and reproduction. The student is expected to:	(A) describe the reproductive systems of various livestock	(i) describe the reproductive systems of various livestock	Student/Teacher	Narrative	9781614592082	Basic Animal Reproduction	
			Student/Teacher	Activity	9781614592082	Vocabulary Handout; Activity - System Outline; Project - Model Systems; Project - Animal Reproduction; Project - Animal Reproduction Teacher Instruction Sheet	Basic Animal Reproduction
			Student/Teacher	Narrative	9781614592082	Beef Cattle Management Practices	
			Student/Teacher	Narrative	9781614592082	Swine Management Practices	
			Student/Teacher	Narrative	9781614592082	Sheep Management Practices; Goat Management Practices	PLEASE NOTE: Due to space limitations, more than one narrative correlation lesson is listed on this line. Several lessons and corresponding activities satisfy this standard.
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(7) The student explains animal genetics and reproduction. The student is expected to:	(B) explain the use of genetics in animal agriculture such as Expected Progeny Differences (EPD's), phenotype and genotype	(i) explain the use of genetics in animal agriculture	Student/Teacher	Narrative	9781614592082	Advanced Animal Genetics	
			Student/Teacher	Activity	9781614592082	Project - Heritable Traits; Activity - Genetics Lab; Activity - Genetics Lab Answer Key	Advanced Animal Genetics
			Student/Teacher	Narrative	9781614592082	Livestock Breeding Systems	
			Student/Teacher	Activity	9781614592082	Activity - Create a Composite	Livestock Breeding Systems
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(7) The student explains animal genetics and reproduction. The student is expected to:	(C) identify systems of animal breeding	(i) identify systems of animal breeding	Student/Teacher	Narrative	9781614592082	Livestock Breeding Systems	
			Student/Teacher	Activity	9781614592082	Project - Breeding System	Livestock Breeding Systems
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(7) The student explains animal genetics and reproduction. The student is expected to:	(D) research current and emerging technologies in animal reproduction such as cloning, embryo transfer, invitrofertilization, and artificial insemination	(i) research current technologies in animal reproduction	Student/Teacher	Narrative	9781614592082	Livestock Reproduction	
			Student/Teacher	Activity	9781614592082	Activity - Pros and Cons of Various Breeding Methods	Livestock Reproduction
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(7) The student explains animal genetics and reproduction. The student is expected to:	(D) research current and emerging technologies in animal reproduction such as cloning, embryo transfer, invitrofertilization, and artificial insemination	(ii) research emerging technologies in animal reproduction	Student/Teacher	Narrative	9781614592082	Livestock Reproduction	
			Student/Teacher	Activity	9781614592082	Activity - Pros and Cons of Various Breeding Methods	Livestock Reproduction
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(7) The student explains animal genetics and reproduction. The student is expected to:	(E) design and conduct experiments to support known principles of genetics	(i) design experiments to support known principles of genetics	Student/Teacher	Narrative	9781614592082	Advanced Animal Genetics	
			Student/Teacher	Activity	9781614592082	Project - Heritable Traits; Activity - Genetics Lab; Activity - Genetics Lab Answer Key	Advanced Animal Genetics
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(7) The student explains animal genetics and reproduction. The student is expected to:	(E) design and conduct experiments to support known principles of genetics	(ii) conduct experiments to support known principles of genetics	Student/Teacher	Narrative	9781614592082	Advanced Animal Genetics	
			Student/Teacher	Activity	9781614592082	Project - Heritable Traits; Activity - Genetics Lab; Activity - Genetics Lab Answer Key	Advanced Animal Genetics
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(i) identify the role of bacteria in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(ii) identify the role of fungi in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(iii) identify the role of viruses in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(iv) identify the role of genetics in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(v) identify the role of nutrition in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key; Assessment II - Nutritional Diseases; Assessment II - Nutritional Diseases Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(vi) describe the role of bacteria in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment: Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(vii) describe the role of fungi in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment: Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(viii) describe the role of viruses in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(ix) describe the role of genetics in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(A) identify and describe the role of bacteria, fungi, viruses, genetics, and nutrition in disease	(x) describe the role of nutrition in disease	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Activity - Diagnosis & Treatment; Activity - Diagnosis & Treatment Answer Key: Assessment II - Nutritional Diseases; Assessment II - Nutritional Diseases Answer Key	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(B) identify methods of disease control, treatment, and prevention	(i) identify methods of disease control	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Project - Common Regional Animal Diseases	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(B) identify methods of disease control, treatment, and prevention	(ii) identify methods of disease treatment	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Project - Common Regional Animal Diseases	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(B) identify methods of disease control, treatment, and prevention	(iii) identify methods of disease prevention	Student/Teacher	Narrative	9781614592082	Common Animal Diseases	
			Student/Teacher	Activity	9781614592082	Project - Common Regional Animal Diseases	Common Animal Diseases
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(C) classify internal and external parasites including treatment and prevention	(i) classify internal parasites including treatment	Student/Teacher	Narrative	9781614592082	Parasites of Livestock	
			Student/Teacher	Activity	9781614592082	Activity - Name the Parasite	Parasites of Livestock
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(C) classify internal and external parasites including treatment and prevention	(ii) classify internal parasites including prevention	Student/Teacher	Narrative	9781614592082	Parasites of Livestock	
			Student/Teacher	Activity	9781614592082	Activity - Name the Parasite	Parasites of Livestock
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(8) The student identifies animal pests and diseases. The student is expected to:	(C) classify internal and external parasites including treatment and prevention	(iii) classify external parasites including treatment	Student/Teacher	Narrative	9781614592082	Parasites of Livestock	
			Student/Teacher	Activity	9781614592082	Activity - Name the Parasite	Parasites of Livestock
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
(8) The student identifies animal pests and diseases. The student is expected to:	(C) classify internal and external parasites including treatment and prevention	(iv) classify external parasites including prevention	Student/Teacher	Narrative	9781614592082	Parasites of Livestock	
			Student/Teacher	Activity	9781614592082	Activity - Name the Parasite	Parasites of Livestock
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(9) The student knows the factors impacting commodity prices and costs. The student is expected to:	(A) evaluate the relationship between livestock commodity markets	(i) evaluate the relationship between livestock commodity markets	Student/Teacher	Narrative	9781614592082	Agricultural Markets: Commodities & Contracts	
			Student/Teacher	Activity	9781614592082	Activity - Supply & Demand	Agricultural Markets: Commodities & Contracts
			Student/Teacher				
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(9) The student knows the factors impacting commodity prices and costs. The student is expected to:	(B) formulate rations based on least-cost factors	(i) formulate rations based on least-cost factors	Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Least-Cost Formulation; Activity - Least-Cost Formulation Answer Key	Advanced Livestock Nutrition
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(9) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(i) design research to identify livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(ii) conduct research to identify livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(iii) complete research to identify livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(iv) design research to solve livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(v) conduct research to solve livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(A) design, conduct, and complete research to identify and solve livestock management problems	(vi) complete research to solve livestock management problems	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Basic Animal Management	
			Student/Teacher	Activity	9781614592082	Activity - Management Scenarios; Activity - Management Scenarios Answer Key	Basic Animal Management
			Student/Teacher				
			Student/Teacher				

Knowledge and Skills Statement	Student Expectation	Breakout	Item Type	Citation Type	Component ISBN	Page (s)	Specific Location
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				
			Teacher Only				
(10) The student plans for dynamic changes in business operation. The student is expected to:	(B) use charts, tables, or graphs to prepare written summaries of data such as nutrition, digestion, and reproduction data obtained in a laboratory activity and an individual scientific research project	(i) use charts, tables, or graphs to prepare written summaries of data	Student/Teacher	Narrative	9781614592082	Scientific Procedures & Safety	
			Student/Teacher	Narrative	9781614592082	Advanced Livestock Nutrition	
			Student/Teacher	Activity	9781614592082	Activity - Nutrient Requirement Table	Advanced Livestock Nutrition
			Student/Teacher	Narrative	9781614592082	Basic Animal Reproduction	
			Student/Teacher	Activity	9781614592082	Project - Animal Reproduction; Project - Animal Reproduction Teacher Instruction Sheet	Basic Animal Reproduction
			Teacher Only	Narrative			
			Teacher Only				
			Teacher Only				
			Teacher Only				