

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: SAE Independent Study

Days: 1-90
Grade Level: 10-12

Topic: Record Keeping (SAE)/Individual topics will vary

National Standards:

ABS.03. Performance Element: Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations.

ABS.03. Performance Element: Apply generally accepted accounting principals and skills to manage cash budgets, credit budgets and credit for AFNR business.

ABS.05. Performance Element: Assess accomplishment of goals and objectives by an AFNR business.

Key Learning: Students will understand why record keeping is an important life skill and how to maintain a PA FFA State Record book.

SAE is meant to be an extension of classroom learning for students. Projects will vary depending on particular student interests. Thus, individual standards will vary from project to project. The standards listed below are standard from one project to another in the way SAE records are kept.



Unit Essential Question: How will SAE help me in my future?

Concept: Record keeping

Concept: SAE

Standards:

Standards:

Leadership and Career Development

Supervised Agricultural Experience

9.1 Develop short, mid- and long-range project plans.

9.2 Develop a Supervised Agricultural Experience (SAE) based upon individual interest and career goals.

9.3 Maintain complete and accurate records.

9.4 Analyze records to determine strengths and areas for improvement.

CC for Writing in Science & Technical Subjects

CC.3.6.9.10.C. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CC.3.6.9-10.I. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

CC for English Language Arts

CC.1.4.9-10.F. Demonstrate a grade appropriate command of the

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	conventions of standard English grammar, usage, capitalization, punctuation, and spelling. CC for Mathematics C.C.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.	
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<u>Lesson Essential Question:</u> Why is record keeping important? How will this help me in my future?	<u>Lesson Essential Question:</u> What is an SAE?	
↓	↓	
<u>Vocabulary:</u>	<u>Vocabulary:</u> Supervised Agricultural Experience Entrepreneurship Project Placement Project Improvement Project Practicum Skills Project Research Project Inventory Asset Liability	Quantity Unit Enterprise Common Pages Occupation Initiative Punctuality Net Worth Agreement

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture

Grade Level: 10-12

Topic: Soils

Days: 8- 19

Key Learning: Students will learn the importance of soil and its basic properties.



Unit Essential Question: Why is soil important?

<u>Concept:</u> Soil: The source of life	Concept: Physical Properties of Soils	Concept: Soil Conservation
Standards: Natural Resource Management: 7.5 Describe soil health and soil fertility	Standards: Natural Resource Management: 7.1 Demonstrate the use of the County Soil Survey 7.2 Describe the major soil characteristics and how they affect soil usage 7.3 Describe soil erosion and what causes soil erosion 10.2 Use County Soil Survey information to identify appropriate land use of various soil types Plant and Soil Science 7.1 Identify and describe soil characteristics 7.2 Analyze and interpret soil surveys	Standards: Natural Resource Management: 7.4 Explain how to control farm and non-farm soil erosion 14.4 Explain the tie between preserving farmland, and preserving the farmer and agribusiness infrastructure
↓	↓	↓
Lesson Essential Question: Why is soil important?	Lesson Essential Question: What are the physical properties of soil?	Lesson Essential Question: How do you conserve soil?
↓	↓	↓
Vocabulary:	Vocabulary:	Vocabulary:

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STUDENT LEARNING MAP

Food Web Origin Organic Material Microorganism Nematode Mycorrhizea Macroorganism	Soil texture pH Soil Structure Horizon Soil Profile Parent Material Bedrock Weathering Erosion Clay Aggregate Silt Soil Separates Loam BMP Sand	Conservation Soil Cover Grassed Waterway Filter Strip Conservation Buffer Terrace Overgrazing Strip-Cropping Buffer Strip No Till Field Strip Cover Crop Contour Strip Crop Rotation Conservation Tillage
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Additional Information/Resources:

Latin Base Words related to Soils:

Micro – small **Macro** – large **In** – Against / Not **Sub** – Below **Able** – able to

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture

Grade Level: 10-12

Topic: Crops

Days: 20-31



Key Learning: Students will know the basics of crops including what they look like, what they are used for and any related “hot topics”.



Unit Essential Question: What should I know about Lebanon County Crops?

Concept: Crops	Concept: Crop Categories	Concept: Lebanon County Crops
Standards: Plant and Soil Science: 10.1 Identify crops and develop a cropping plan 10.2 Identify and select seed and seedlings	Standards: Plant and Soil Science: 10.1 Identify crops and develop a cropping plan 10.2 Identify and select seed and seedlings	Standards: Plant and Soil Science: 10.1 Identify crops and develop a cropping plan 10.2 Identify and select seed and seedlings
↓	↓	↓
Lesson Essential Question: What is a crop?	Lesson Essential Question: How are crops classified?	Lesson Essential Question: What crops are commonly grown in Lebanon County?
↓	↓	↓
Vocabulary: Crop Agronomy Warm Season Crop Cool Season Crop Annual Biennial Perennial	Vocabulary: Grain Crop Legume Oil Crop Grass Specialty Crop Forage Crop Pasture Crop Stimulate Hay Silage	Vocabulary: Corn Orchard Grass Wheat Maturity Straw Short Day Soybean Long Day Rye Economic Barley Green Manure Alfalfa Nurse Plant Timothy Silage Byproduct

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<p>Concept: Crops for Animal Production</p>	<p>Concept: Selection of Seeds</p>	<p>Concept: Biotechnology</p>
<p>Standards: Plant and Soil Science: 1.7 Discuss the benefits of organic plant production and organic weed and pest controls. 2.3 Describe crop production food safety procedures that ensure safe food for consumers.</p>	<p>Standards: Plant and Soil Science: 10.2 Identify and select seed and seedlings</p>	<p>Standards: Biotechnology: 1.1 Analyze the public benefits and risks of biotechnology from the environmental, health and ethical aspects 1.2 Analyze and research the social, political and economic impact of the use of biotechnology in agricultural production 2.1 Explain human safety issues related to genetically engineered foods and thier impact on agricultural production 4.3 Understand product modifications via biotechnology and thier orgins 5.6 Define genetic engineering 6.2 Analyze the differences between traditional plant breeding and genetic engineering of plants</p>
		
<p>Lesson Essential Question: How do I keep a healthy pasture for my animals? Why is proper food storage important?</p>	<p>Lesson Essential Question: How do you select the right seeds?</p>	<p>Lesson Essential Question: How is biotechnology beneficial to agriculture?</p>
		
<p>Vocabulary: Rotational Grazing</p>	<p>Vocabulary: Commercial crop</p>	<p>Vocabulary: Biotechnology</p>

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Carrying Capacity Parasite	Arid Yield Humidity Market Demand Potential Anticipate Profit	Genetically Modified Round-up Ready Smart Stac
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Additional Information/Resources:

Latin Base Words:

Bi – two/twice/double

Annu – year

Bio-life/living

Gene- race/descent

Logy – study of

Para – like/beside

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture
Topic: Sheep & Goats
Days: 32-41

Grade Level: 10-12

Key Learning: Students will know the basics of raising sheep & goats.



Unit Essential Question: How do you raise healthy sheep & goats?

Concept: Sheep & Goat Use	Concept: Terminology	Concept: Sheep & Goat Health
<p>Standards: Animal Science: 1.1 Identify cultural and societal uses of animals locally and globally 6.1 Identify species, breeds and associated products and uses 14.1 Identify byproducts of animals and their uses 14.3 Describe the uses of animal products for human and animal consumption Food Science: 6.1 Identify various food products common in the agriculture industry</p>	<p>Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses 14.1 Identify byproducts of animals and their uses 14.3 Describe the uses of animal products for human and animal consumption</p>	<p>Standards: Animal Science: 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 7.1 Explain the physiology of animal reproduction 7.4 Describe animal reproductive behaviour 9.8 Identify the organs and functions of the digestive system 10.1 Describe normal animal behavior by species, along with causes and potential results of abnormal behavior 10.3 Demonstrate proper handling techniques and describe the related psychological/behavioral principals 11.2 Identify animal identification techniques and their proper application 12.1 Describe housing systems 13.2 Recognize, identify and evaluate the effects of</p>

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		<p>common diseases, parasites and poisons</p> <p>13.3 Describe preventative animal health and treatment techniques</p> <p>13.6 Interpret animal health product labels</p> <p>PA Core Standards for Writing in Science & Technical Subjects:</p> <p>CC.3.6.11-12.B. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes</p>
↓	↓	↓
<p>Lesson Essential</p> <p>Question: How can sheep be used to make a profit?</p>	<p>Lesson Essential</p> <p>Question: What is the proper terminology for sheep & goats?</p>	<p>Lesson Essential</p> <p>Question: How do I keep my sheep/goat healthy?</p>
↓	↓	↓
<p>Vocabulary:</p> <p>Lanolin</p> <p>Cashmere</p>	<p>Vocabulary:</p> <p>Ram</p> <p>Wether</p> <p>Ewe</p> <p>Lamb</p> <p>Wean</p> <p>Flock</p> <p>Farm Flock</p> <p>Range Flock</p> <p>Fleece</p> <p>Crimp</p> <p>Shearing</p> <p>Mutton</p> <p>Kosher Meat</p> <p>Ruminant</p> <p>Buck</p> <p>Doe</p> <p>Kid</p> <p>Herd</p>	<p>Vocabulary:</p> <p>Roughage</p> <p>Conceive</p> <p>Isolate</p> <p>Dock</p> <p>Worm</p> <p>Puberty</p> <p>Heat</p> <p>Estrus</p> <p>Flushing</p> <p>Lambing</p> <p>Gestation</p> <p>Colostrum</p>

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

	Sheep & Goat Body Parts	
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Additional Information/Resources:

Base Words:

Auto – self **patho** – disease **eco** – house/ environment

Anti- against/opposite **derm** - skin

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture
Topic: Swine Production
Days: 42-51

Grade Level: 10-12

Key Learning: Students will know and be able to explain the basic concepts of swine production in the United States.



Unit Essential Question: How can swine be used to make a profit?

Concept: What are swine used for?	Concept: What do I need to know to raise healthy swine?	Concept: How is swine processed?
<p>Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses</p>	<p>Standards: Animal Science: 4.2 Identify industry and commodity groups as resources 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 6.7 Describe personal conduct and code of ethics regarding fitting/showing techniques for specific species 7.1 Explain the physiology of animal reproduction 7.4 Describe animal reproductive behaviour 10.1 Describe normal animal behavior by species, along with causes and potential results of abnormal behavior 10.3 Demonstrate proper handling techniques and describe the related psychological/behavioral principals</p>	<p>Standards: Animal Science: 6.4 Identify basic anatomy of animals 14.1 Identify byproducts of animals and their uses 14.2 Explain animal product labeling and packaging 14.3 Describe the uses of animal products for human and animal consumption Food Science: 2.1 Explain Federal and state regulations and guidelines for food safety and inspection 4.5 Describe the process that an agricultural product takes from producer to consumer 6.1 Identify various food products common in the agriculture industry 6.2 Identify and explain equipment and procedures utilized for food processing 7.4 Identify food additives and enhancers by</p>

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	<p>11.2 Identify animal identification techniques and their proper application</p> <p>12.1 Describe housing systems</p> <p>13.2 Recognize, identify and evaluate the effects of common diseases, parasites and poisons</p> <p>13.3 Describe preventative animal health and treatment techniques</p> <p>13.6 Interpret animal health product labels</p> <p>13.7 Demonstrate safe and proper application and administration of animal health products</p>	<p>examining food labels for content</p>
↓	↓	↓
<p><u>Lesson Essential</u> <u>Question:</u> Who ranks first in swine production? How do I sound intelligent when talking about swine? What are the common breeds of swine?</p>	<p><u>Lesson Essential</u> <u>Question:</u> How do swine reproduce? How do you identify swine? What is a healthy diet for swine? How can housing affect my swine? How do you safely move swine?</p>	<p><u>Lesson Essential</u> <u>Question:</u> What are the swine parts?</p>
↓	↓	↓
<p><u>Vocabulary:</u> Castration Purebred Commercial Boar Barrow Sow Gilt Farrow Feeder Pig</p>	<p><u>Vocabulary:</u> Estrus Standing Heat Ovulation Gestation Flushing Ear Notching Artificial Insemination Foster Teaser Boar</p>	<p><u>Vocabulary:</u> Serving Size Calorie Sodium Mechanically Separated Meat Swine Parts Establishment number Special Handling Hog Section</p>

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Hog Litter Market Hog Packing Plant Pork Wean Finishing Crossbreed Pig or Piglet	Ventilation	Ham
<u>Additional Information/Resources:</u> Latin Bases: Mono – One Bi – two/double/twice Di - two/double Tri - three Quad - four		

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture
Topic: Dairy Production
Days: 62-72

Grade Level: 10-12




Key Learning: Students will know and be able to explain the basic concepts of dairy production in the United States.



Unit Essential Question: How are dairy products made in the U.S.?

<u>Concept:</u> Dairy Herds	<u>Concept:</u> Dairy Herds	<u>Concept:</u> Milk Production
<p>Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses Animal Science: 11.1 Explain the appropriate use of various animal management record keeping methods 12.1 Describe housing systems 13.2 Recognize, identify and evaluate the effects of common diseases, parasites and poisons 13.3 Describe preventative animal health and treatment techniques 13.6 Interpret animal health product labels</p>	<p>Standards: Animal Science: 7.1 Explain the physiology of animal reproduction 7.4 Describe animal reproductive behaviour 7.6 Compare and contrast artificial insemination, embryo transfer, cloning, as well as future emerging technologies 7.7 Describe current reproductive management techniques (i.e. heat detection, estrous synchronization, etc.)</p>	<p>Standards: Animal Science: 4.6 Describe the diversity of the animal industry and its impact on local, state and the national economy 7.1 Explain the physiology of animal reproduction Food Science: 1.1 Identify emerging technologies and their impact on food products and processing</p>
↓	↓	↓
<p>Lesson Essential Question: What are the 6 major breeds of dairy cattle? What are the keys to</p>	<p>Lesson Essential Question: How does a farmer efficiently reproduce his animals?</p>	<p>Lesson Essential Question: Why is milk production important in Pennsylvania? How do farmers milk their</p>

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maintaining a healthy herd?		cows?
		
<p><u>Vocabulary:</u> Holstein Jersey Guernsey Brown Swiss Ayrshire Milking Shorthorn DHIA Ration Concentrate TMR</p>	<p><u>Vocabulary:</u> Freshening or Freshen Dry Artificial Insemination Flushing Veal</p>	<p><u>Vocabulary:</u> Butterfat Consistent Feed conversion Parlor Stanchion Robotic Oxytocin</p>

<u>Concept:</u> Milk Markets	<u>Concept:</u> Milk Production	<u>Concept:</u> Hot Topics in Dairy
<p><u>Standards:</u> Animal Science: 6.3 Analyze trends and the effect of industry standards on consumer preferences and vice-versa Food Science: 1.2 Define trends in food production, world population and supply and demand for food products 4.4 Recognize value-added products and thier impact on consumer purchasing trends 4.7 Identify marketing strategies to deliver quality food products to consumers 6.3 Explain the impact customer demand has on food production, processing and presentation Management, Economics</p>	<p><u>Standards:</u> Food Science: 1.1 Identify emerging technologies and thier impact on food products and processing 1.3 Describe the historical development of food processing and preservation 2.2 Analyze and demonstrate food handling safety 4.5 Describe the process that an agricultural product takes from producer to consumer 5.5 Explain the physical and chemical processes involved in various food production and food processing techniques 6.1 Identify various food products common in the</p>	<p><u>Standards:</u> Animal Science: 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 9.10 Identify the advantages and disadvantages of the use of hormones, growth regulations and medications in animal agriculture 15.4 Explain local and global consumer concerns of animal agriculture over food safety and animal welfare</p>

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<p>and Marketing 11.6 Identify industry standards, grades and inspection procedures for agricultural products as they affect marketing</p>	<p>agriculture industry 6.2 Identify and explain the equipment and procedures utilized for food processing 7.2 Identify food industry standards and grades 7.3 Describe safe food preparation techniques, along with the food inspection system</p>	
↓	↓	↓
<p><u>Lesson Essential Question:</u> How is milk price determined? How is milk classified?</p>	<p><u>Lesson Essential Question:</u> How has milk production changed in the last 100 years? How is milk processed?</p>	<p><u>Lesson Essential Question:</u> Why are these topics considered “hot topics”?</p>
↓	↓	↓
<p><u>Vocabulary:</u> Elastic Price Inelastic price Consumer Quantity</p>	<p><u>Vocabulary:</u> Pasteurization Class I, II & III Raw Milk Whole Milk Skim Milk Cream Homogenization Somatic Cell Count Freezing Drug Residue Sediment Test Curds Whey</p>	<p><u>Vocabulary</u> BST Factory Farming</p>

<p><u>Additional Information/Resources:</u> Latin Bases: Chrom – color Chlor – green Cyana- blue-green leuc – white vore - eating</p>
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EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture
Topic: Beef Production
Days: 52-61

Grade Level: 10-12

Key Learning: Students will know and be able to explain the basic concepts of beef production in the United States.



Unit Essential Question: How can beef be used to make a profit?







Concept: U.S. Beef Production	Concept: Beef Vocabulary	Concept: Farm Practices
<p>Standards: Animal Science: 4.6 Describe the diversity of the animal industry and its impact on local, state and the national economy 15.1 Research and describe current consumer food trends Food Science: 4.7 Identify marketing strategies to deliver quality food products to consumers</p>	<p>Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses 6.3 Analyze trends and the effect of industry standards on consumer preferences and vice-versa Food Science: 6.3 Explain the impact customer demand has on food production, processing and presentation</p>	<p>Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses 11.2 Identify animal identification techniques and thier proper application</p>
↓	↓	↓
<p>Lesson Essential Question: Why is the United States known for its beef production? How did beef production get started in the U.S?</p>	<p>Lesson Essential Question: How can I sound intelligent when talking about beef? How do farmers pick what breed of cattle to grow? What are the top 6 breeds grown in the U.S.?</p>	<p>Lesson Essential Question: How do farmers tell bovine apart? How do West coast and East coast cattle production differ? How are they alike?</p>
↓	↓	↓
Vocabulary:	Vocabulary:	Vocabulary:

EASTERN LEBANON COUNTY SCHOOL DISTRICT
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Consume Import Export	Bovine Cow Heifer Calf Bull Steer Sire Breed Dam Breed Herd Cull Free Range Polled Horned Dehorn Feeder Calf Finish Breed Market Demand	Purebred Operation Cow-calf operation Stocker Operation Feedlot Operation Rendering Plant Seed stock
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<u>Concept:</u> Farm Practices	<u>Concept:</u> Beef to Eat	<u>Concept:</u> Hot Topics
<p>Standards: Animal Science: 7.1 Explain the physiology of animal reproduction 7.4 Describe animal reproductive behaviour 7.7 Describe current reproductive management techniques (i.e. heat detection, estrous synchronization, etc.) 9.10 Identify the advantages and disadvantages of the use of hormones, growth regulations and medications in animal agriculture 12.1 Describe housing systems 13.2 Recognize, identify and evaluate the effects of</p>	<p>Standards: Animal Science: 2.3 Safely handle animal products (health products, meat, milk, wastes) 14.3 Describe the uses of animal products for human and animal consumption Food Science: 1.1 Identify emerging technologies and their impact on food products and processing 2.2 Analyze and demonstrate food handling safety 4.5 Describe the process that an agricultural product takes from producer to consumer 7.2 Identify food industry standards and grades</p>	<p>Standards: Animal Science: 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 10.1 Describe normal animal behavior by species, along with causes and potential results of abnormal behavior 10.3 Demonstrate proper handling techniques and describe the related psychological/behavioral principals 15.4 Explain local and global consumer concerns of animal agriculture over food safety and animal welfare</p>

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<p>common diseases, parasites and poisons 13.3 Describe preventative animal health and treatment techniques 13.6 Interpret animal health product labels 13.7 Demonstrate safe and proper application and administration of animal health products</p>	<p>Common Core Standards Mathematics: CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems</p>	<p>Food Science: 1.6 Identify food safety issues and consumer concerns affecting food science 5.5 Explain the physical and chemical processes involved in various food production and food processing techniques</p>
		
<p>Lesson Essential Question: How can I efficiently raise healthy animals?</p>	<p>Lesson Essential Question: How is beef classified? How should beef be handled when cooking? What determines a better cut of beef? Why? What else can beef cattle be used for besides beef?</p>	<p>Lesson Essential Question: Why are these considered “Hot Topics”?</p>
		
<p>Vocabulary: Burdizzo Elastrator bands Implants Standing Estrus Synchronization</p>	<p>Vocabulary: Supply & Demand Shrinkage Yield 1-5 Meat Quality Grades Marbling</p>	<p>Vocabulary: BSE (Bovine Spongiform Encephalopathy) Pink Slime</p>

<p>Additional Information/Resources:</p>			
<p>Latin Bases:</p>			
<p>penta – five</p>	<p>quin – five</p>	<p>hex – six</p>	<p>sex – six</p>
<p>sept – seven</p>		<p>oct – eight</p>	<p>dec - ten</p>

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

Course/Subject: Production Agriculture
Topic: Poultry Production
Days: 73-84

Grade Level: 10-12

Key Learning: Students will know and be able to explain the basic concepts of poultry & egg production in the United States.



Unit Essential Question: How can poultry be used to make a profit?

Concept: History of Poultry	Concept: Poultry Vocabulary	Concept: Uses of Chickens
Standards: Animal Science: 4.6 Describe the diversity of the animal industry and its impact on local, state and the national economy 5.3 Analyze the impact of new and emerging technologies on teh marketing and management of animals	Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses 6.4 Identify basic anatomy of animals	Standards: Animal Science: 6.1 Identify species, breeds and associated products and uses 14.1 Identify byproducts of animals and their uses 14.3 Describe the uses of animal products for human and animal consumption
↓	↓	↓
Lesson Essential Question: What came first: the chicken or the egg? How is the U.S. recognized in poultry production? How is PA ranked in poultry & egg production?	Lesson Essential Question: How do I sound intelligent when referring to poultry?	Lesson Essential Question: How are chickens used to help Americans?
↓	↓	↓
Vocabulary: Prevalent	Vocabulary: Rooster Cock Chick	Vocabulary: Comb

EASTERN LEBANON COUNTY SCHOOL DISTRICT
STUDENT LEARNING MAP

	Pullet Cockerel Capon Flock Molt Layer Broiler Roaster Tom Poult Jake Jenny Hen Drake Gander Gosling	
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Concept: Chicken Management	Concept: The Incredible Egg	Concept: Hot Topics
Standards: Animal Science: 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 7.4 Describe animal reproductive behavior 9.10 Identify the advantages and disadvantages of the use of hormones, growth regulations and medications in animal agriculture 10.3 Demonstrate proper handling techniques and describe the related psychological/behavioral principals 11.3 Describe the purposes of animal management practices used to control	Standards: Animal Science: 6.4 Identify basic anatomy of animals 7.1 Explain the physiology of animal reproduction 14.2 Explain animal product labeling and packaging 14.3 Describe the uses of animal products for human and animal consumption Food Science: 1.1 Identify emerging technologies and thier impact on food products and processing 4.5 Describe the process that an agricultural product takes from producer to consumer 7.2 Identify food industry standards and grades Common Core Standards	Standards: Animal Science: 5.2 Describe environmental, food, medicines, public safety and biosecurity issues related to animal health 15.4 Explain local and global consumer concerns of animal ariculture over food safety and animal welfare.

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animal behavior, handling safety and housing 12.1 Describe housing systems 13.2 Recognize, identify and evaluate the effects of common diseases, parasites and poisons 13.3 Describe preventative animal health and treatment techniques	Mathmatics: CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathmatical problems	
↓	↓	↓
<u>Lesson Essential Question:</u> What are the key things done to chickens and why are they done?	<u>Lesson Essential Question:</u> How do eggs form?	<u>Lesson Essential Question:</u> Why are people talking about these hot topics?
↓	↓	↓
<u>Vocabulary:</u> Debeaking Medicated Feed Market	<u>Vocabulary:</u> Egg Avian Shell Inner Membrane Outer Membrane Air Cell Albumen Chalazae Vitelline Membrane Germinal Disc Yolk Ovulation Fertile Candling Incubation Incubator	<u>Vocabulary</u> Avian Flu Biosecurity Factory Farming

<u>Additional Information/Resources:</u>
