

CIMC CURRICULUM

ANIMAL SCIENCE

Embedded PASS Core Curriculum

◆ Math-----Met minimal PASS requirements

❖ **Science-----Met majority of PASS requirements**

Will meet all PASS requirements for Science: Biology when suggested supplements have been implemented.

CIMC CURRICULUM

ANIMAL SCIENCE

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ANIMAL SCIENCE

MATH

ALGEBRA

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Math

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Math

PASS Skills Sub-Core: Algebra I

**PASS Content Standard Area I.
Number Sense/Algebraic Operations**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Translate word phrases and sentences into expressions and equations and vice versa.</p>	<p>C-3:19 Determine proper nutrient and water requirements for livestock in various stages of production.</p> <p>C-3:21 Calculate balanced rations for livestock on a hypothetical farm.</p> <p>C-3:25 Develop a grazing plan.</p> <p>C-4:9 Calculate mixes and dosage levels for animal health products.</p> <p>D-1:12 Calculate break even price.</p>
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	<p>D-1:13 Calculate selling prices of livestock when given the kind of livestock, number, price per hundredweight, and the shrinkage, if any.</p> <p>D-1:14 Calculate prices of hogs and cattle according to yield and grade.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-3:5 Compare the costs of selected criteria for chicken and turkey production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
<p>B. Apply the laws of exponents to perform operations on expressions with integral exponents.</p>	
<p>C. Simplify and evaluate expressions</p>	<p>C-3:19 Determine proper nutrient and water requirements for livestock in various stages of production.</p>

	<p>C-3:21 Calculate balanced rations for livestock on a hypothetical farm.</p> <p>C-3:25 Develop a grazing plan.</p> <p>C-4:9 Calculate mixes and dosage levels for animal health products.</p> <p>D-1:12 Calculate break even price.</p> <p>D-1:13 Calculate selling prices of livestock when given the kind of livestock, number, price per hundredweight, and the shrinkage, if any.</p> <p>D-1:14 Calculate prices of hogs and cattle according to yield and grade.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p> <p>D-2:19 Classify swine according to slaughter grades.</p>
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	<p>D-3:5 Compare the costs of selected criteria for chicken and turkey production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p> <p>D-4:2 Discuss supply and demand.</p>
<p>D. Add, subtract, and multiply polynomials.</p>	

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Math

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Math

PASS Skills Sub-Core: Algebra I

**PASS Content Standard Area II.
Functions and Relations**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Define and distinguish between relations and functions, dependent and independent variables, and domain and range using function notation.</p>	
<p>B. Recognize the parent graph of the functions $y=k$, $y=x$, $y= x$, and predict the effects of transformations on the parent graph (e.g., $y= x + 2$, change slope, change intercepts, change slope and intercept).</p>	
<p>C. Evaluate a function using tables, verbal rules, equations, or graphs.</p>	<p>D-1:12 Calculate break even price.</p>
<p>D. Find the slope of a line.</p>	
<p>E. Write the equation of and graph linear relationships.</p>	

<p>F. Use slope to determine if lines are parallel, perpendicular, horizontal, or vertical.</p>	
<p>G. Collect and graph real data.</p>	
<p>H. Describe rates of constant change experienced within the context of everyday life as the slope of a linear relation (e.g., cost of hamburger meat based on weight, cost of gas based on cost per gallon, telephone charges based on base rate plus rate per minute).</p>	
<p>I. Solve linear equations by graphing or using properties of equality.</p>	
<p>J. Solve linear inequalities by graphing or using properties of inequalities.</p>	
<p>K. Match appropriate equations or inequalities (1 or 2 variables) to a graph, table, or situation and vice versa.</p>	
<p>L. Solve a system of linear equations.</p>	
<p>M. Solve routine two-step and three-step problems using concepts such as rate, distance, ratio, and proportion, average and percent.</p>	

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Math

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Math

PASS Skills Sub-Core: Algebra I

**PASS Content Standard Area III.
Geometry/Measurement**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Use the formulas from geometry (perimeter, circumference, area and volume), science, and statistics, to solve problems within an algebraic context.</p>	<p>C-3:14 Design a feed storage area.</p>
<p>B. Apply units of measure to interpret results (e.g., miles per gallon, cost per unit).</p>	<p>D-1:12 Calculate break even price.</p> <p>D-1:13 Calculate selling prices of livestock when given the kind of livestock, number, price per hundredweight, and the shrinkage, if any.</p> <p>D-1:14 Calculate prices of hogs and cattle according to yield and grade.</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Math

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Math

PASS Skills Sub-Core: Algebra I

**PASS Content Standard Area IV.
Data Analysis, Statistics, and Probability**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Translate from one representation of data to another and understand the data can be represented using a variety of tables, graphs ,and symbols and that different modes of representation often convey different messages.</p>	<p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p>
<p>B. Collect data involving two variables and display on a scatter plot; interpret results using a linear model/equation and identify whether the model/equation is a line of best fit for the data (e.g., given a scatter plot and several linear equations, which one is the best fit?).</p>	<p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p>

C. Formulate and answer questions based on data shown on graphs, tables, charts; make valid inferences, predictions, and arguments.	
D. Solve problems involving the probability of an event and its complement.	

ANIMAL SCIENCE

SCIENCE

BIOLOGY

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area I.
Observing and Measuring**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Identify similar or different characteristics in a given set of objects, organisms, or events.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p>
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	<p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p>
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	<p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
<p>B. Select qualitative (descriptive) or quantitative (numerical) observations in a given set of objects, organisms, or events.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p>

	<p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p>
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	<p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
<p>C. Identify qualitative (descriptive) or quantitative (numerical) observations in a given set of objects, organisms, or events.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p>

	<p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p>
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	<p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
<p>D. Use the appropriate Systems International (SI) units (grams, meters, liters, and degrees Celsius) to measure objects, organisms, or events.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p>

	<p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p>
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	<p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area II.
Classifying**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Use observable properties to classify a set of objects, organisms, or events.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
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<p>B. Identify the properties on which a given classification system is based.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>
<p>C. Place an object, organism or event into a classification system.</p>	<p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area III.
Experimenting**

Content Skill Knowledge Matching Curriculum Objectives

A. Arrange the steps of a scientific problem in logical order.	** See supplement booklet to meet this PASS requirement.**
B. Identify the independent variables, dependent variables, and control in an experimental set-up.	** See supplement booklet to meet this PASS requirement.**
C. Use mathematics to show relationships within a given set of observations.	** See supplement booklet to meet this PASS requirement.**
D. Identify a hypothesis for a given problem.	** See supplement booklet to meet this PASS requirement.**

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area IV.
Interpreting**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Select appropriate predictions based on previously observed patterns of evidence.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>D-1:4 Interpret livestock reports.</p>
<p>B. Report data in an appropriate manner.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p>
<p>C. Predict data points not included on a given graph.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p>
<p>D. Interpret line, bar, and circle graphs.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p>

	<p>D-1:4 Interpret livestock reports.</p>
<p>E. Identify data that support or reject stated hypothesis.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>D-1:4 Interpret livestock reports.</p>
<p>F. Accept or reject hypothesis when given results of an investigation.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance record.</p> <p>D-1:4 Interpret livestock reports.</p>
<p>G. Identify discrepancies between stated hypothesis and actual results.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>D-1:4 Interpret livestock reports.</p>
<p>H. Select the most logical conclusion for given experimental data.</p>	<p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>D-1:4 Interpret livestock reports.</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Health Science Technology LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area V.
Communicating**

Content Skill Knowledge	Matching Curriculum Objectives
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<p>A. Prepare a written report describing the sequence, results, and interpretation of an investigation or event.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>
<p>B. Communicate and defend a scientific argument.</p>	<p>B-1:17 Discuss a specific advance in genetic engineering.</p>
<p>C. Identify or create an appropriate graph or chart from collected data, table, or written description.</p>	<p>B-1:17 Discuss a specific advance in genetic engineering.</p> <p>C-6:13 Complete a chart on methods of identification for cattle, swine, and sheep.</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area VI.
Modeling**

Content Skill Knowledge Matching Curriculum Objectives

<p>A. Select a model, which explains a given set of observations.</p>	<p>C-6:14 Label common earmarks for cattle.</p> <p>C-6:20 Interpret swine ear notches.</p>
<p>B. Select predictions based on models.</p>	<p>C-6:14 Label common earmarks for cattle.</p> <p>C-6:20 Interpret swine ear notches.</p>
<p>C. Compare a given model to the real world.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area VII.
Safety in the Science Classroom**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Recognize potential hazards within a science activity.</p>	<p>A-1:1 Choose the word phrase to complete statements about safety in the animal science industry.</p> <p>A-1:2 Choose the word or phrase to complete statements about trends in animal science.</p> <p>A-1:3 Report on current events in animal science.</p> <p>A-1:4 State safety factors to observe in working livestock.</p> <p>A-1:5 Select factors affecting facility safety.</p>
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	<p>A-1:6 State safety precautions for equipment.</p> <p>A-1:7 Observe livestock for potential hazards.</p> <p>A-1:8 Analyze case studies for behavioral factors that affect livestock handling.</p> <p>A-1:9 List common livestock-handling injuries and their causes.</p> <p>A-1:10 Develop a list of safety procedures for handling livestock.</p> <p>A-1:11 Choose the word or phrase to complete statements about hazards of animal disease.</p> <p>A-1:12 Discuss the impact of hormone use on animal and public safety.</p> <p>C-6:2 State precautions and safety considerations for hoof trimming.</p>
<p>B. Practice safety procedures in all science activities.</p>	<p>A-1:1 Choose the word phrase to complete statements about safety in the animal science industry.</p>

	<p>A-1:2 Choose the word or phrase to complete statements about trends in animal science.</p> <p>A-1:3 Report on current events in animal science.</p> <p>A-1:4 State safety factors to observe in working livestock.</p> <p>A-1:5 Select factors affecting facility safety.</p> <p>A-1:6 State safety precautions for equipment.</p> <p>A-1:7 Observe livestock for potential hazards.</p> <p>A-1:8 Analyze case studies for behavioral factors that affect livestock handling.</p> <p>A-1:9 List common livestock-handling injuries and their causes.</p> <p>A-1:10 Develop a list of safety procedures for handling livestock.</p>
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	<p>A-1:11 Choose the word or phrase to complete statements about hazards of animal disease.</p> <p>A-1:12 Discuss the impact of hormone use on animal and public safety.</p> <p>C-6:2 State precautions and safety considerations for hoof trimming.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area VIII.
Inquiry**

Content Skill Knowledge Matching Curriculum Objectives

<p>A. Formulate a testable hypothesis and design an appropriate experiment relating to the world.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>
<p>B. Design and conduct scientific investigations in which variables are identified and controlled.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>
<p>C. Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>

<p>D. Inquiries should lead to the formation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigations) and arguments that encourage the revision of their explanations, leading to further inquiry.</p>	<p>** See supplement booklet to meet this PASS requirement.**</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area IX.
The Cell**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Cells are the fundamental unit of life, comprised of a variety of structures that perform functions, such as transport information and synthesis of molecules.</p>	<p>B-1:3 Discuss basic genetic principles.</p> <p>B-1:5 Choose the word or phrase to complete statements about how genetic characteristics are transmitted.</p> <p>B-1:6 Discuss inherited traits and heritability.</p> <p>B-1:7 Discuss sex determination and sex-linked traits.</p> <p>B-1:8 Draw a diagram showing the inheritance of horns in cattle for the F1 and F2 generations.</p>
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	<p>B-1:9 Determine color inheritance of offspring.</p> <p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p> <p>B-1:12 List factors affecting fertility.</p> <p>B-3:4 Choose the word or phrase to complete statements about semen.</p> <p>B-3:5 Choose the word or phrase to complete statements about semen cells.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p>
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	<p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-6:1 Choose the word or phrase to complete statements about genetic engineering.</p> <p>B-6:3 Discuss embryo transfer.</p>
<p>B. Cells function according to the information contained in DNA.</p>	<p>B-1:3 Discuss basic genetic principles.</p> <p>B-1:5 Choose the word or phrase to complete statements about how genetic characteristics are transmitted.</p> <p>B-1:6 Discuss inherited traits and heritability.</p> <p>B-1:7 Discuss sex determination and sex-linked traits.</p> <p>B-1:8 Draw a diagram showing the inheritance of horns in cattle for the F1 and F2 generations.</p> <p>B-1:9 Determine color inheritance of offspring.</p>

	<p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p> <p>B-1:12 List factors affecting fertility.</p> <p>B-3:4 Choose the word or phrase to complete statements about semen.</p> <p>B-3:5 Choose the word or phrase to complete statements about semen cells.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p>
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	<p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-6:1 Choose the word or phrase to complete statements about genetic engineering.</p> <p>B-6:3 Discuss embryo transfer.</p>
<p>C. Cells can differentiate and may develop into complex multi-cellular organisms.</p>	<p>B-1:3 Discuss basic genetic principles.</p> <p>B-1:5 Choose the word or phrase to complete statements about how genetic characteristics are transmitted.</p> <p>B-1:6 Discuss inherited traits and heritability.</p> <p>B-1:7 Discuss sex determination and sex-linked traits.</p> <p>B-1:8 Draw a diagram showing the inheritance of horns in cattle for the F1 and F2 generations.</p> <p>B-1:9 Determine color inheritance of offspring.</p> <p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p>

	<p>B-1:12 List factors affecting fertility.</p> <p>B-3:4 Choose the word or phrase to complete statements about semen.</p> <p>B-3:5 Choose the word or phrase to complete statements about semen cells.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p>
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	<p>B-6:1 Choose the word or phrase to complete statements about genetic engineering.</p> <p>B-6:3 Discuss embryo transfer.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area X.
The Molecular Basis of Heredity**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. In all organisms, the instructions for specifying the characteristics of the organism are carried in DNA, and changes in DNA (mutations) occur spontaneously at low rates.</p>	<p>B-1:2 Choose the word or phrase to complete statements about selecting livestock for desirable characteristics.</p> <p>B-1:5 Choose the word or phrase to complete statements about how genetic characteristics are transmitted.</p> <p>B-1:6 Discuss inherited traits and heritability.</p> <p>B-1:7 Discuss sex determination and sex-linked traits.</p>
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	<p>B-1:8 Draw a diagram showing the inheritance of horns in cattle for the F1 and F2 generations.</p> <p>B-1:9 Determine color inheritance of offspring.</p> <p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p> <p>B-1:12 List factors affecting fertility.</p> <p>B-1:17 Discuss a specific advance in genetic engineering.</p> <p>B-2:1 Choose the word or phrase to complete statements about reproduction.</p> <p>B-2:2 Label components of the male reproductive tract.</p> <p>B-2:3 Match male reproductive organs to their functions.</p> <p>B-2:4 Label components of the reproductive tracts of a cow and a sow.</p>
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	<p>B-2:5 Match female reproductive organs to their functions.</p> <p>B-2:6 Choose the word or phrase to complete statements about poultry reproductive systems.</p> <p>B-3:1 Choose the word or phrase to complete statements about artificial insemination.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p>
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	<p>B-5:3 Discuss dystocia.</p> <p>B-6:5 Discuss gene mapping and gene splicing.</p> <p>B-6:6 Select situations in which gene splicing can be used.</p> <p>D-3:3 Discuss criteria for selecting poultry.</p> <p>D-3:4 Select chickens for meat, eggs, and breeding production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
<p>B. A sorting and recombination of genes in production results in a great variety of possible gene combinations from the offspring of any two parents.</p>	<p>B-1:2 Choose the word or phrase to complete statements about selecting livestock for desirable characteristics.</p> <p>B-1:5 Choose the word or phrase to complete statements about how genetic characteristics are transmitted.</p> <p>B-1:6 Discuss inherited traits and heritability.</p>

	<p>B-1:7 Discuss sex determination and sex-linked traits.</p> <p>B-1:8 Draw a diagram showing the inheritance of horns in cattle for the F1 and F2 generations.</p> <p>B-1:9 Determine color inheritance of offspring.</p> <p>B-1:10 Estimate possible gene combinations using the Punnett Square method.</p> <p>B-1:12 List factors affecting fertility.</p> <p>B-1:17 Discuss a specific advance in genetic engineering.</p> <p>B-2:1 Choose the word or phrase to complete statements about reproduction.</p> <p>B-2:2 Label components of the male reproductive tract.</p> <p>B-2:3 Match male reproductive organs to their functions.</p>
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	<p>B-2:4 Label components of the reproductive tracts of a cow and a sow.</p> <p>B-2:5 Match female reproductive organs to their functions.</p> <p>B-2:6 Choose the word or phrase to complete statements about poultry reproductive systems.</p> <p>B-3:1 Choose the word or phrase to complete statements about artificial insemination.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p>
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	<p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-5:3 Discuss dystocia.</p> <p>B-6:5 Discuss gene mapping and gene splicing.</p> <p>B-6:6 Select situations in which gene splicing can be used.</p> <p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p> <p>D-2:7 Name qualifications for quality grades of cattle.</p>
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	<p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p> <p>D-2:17 Match the slaughter grades of swine to their description.</p>
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	<p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p> <p>D-3:3 Discuss criteria for selecting poultry.</p> <p>D-3:4 Select chickens for meat, eggs, and breeding production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area XI.
Biological Diversity**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Different species might look dissimilar, but the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry.</p>	<p>B-1:2 Choose the word or phrase to complete statements about selecting livestock for desirable characteristics.</p> <p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>B-1:15 Select from a list, true statements about production testing.</p> <p>B-1:17 Discuss a specific advance in genetic engineering.</p>
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	<p>B-2:1 Choose the word or phrase to complete statements about reproduction.</p> <p>B-2:2 Label components of the male reproductive tract.</p> <p>B-2:3 Match male reproductive organs to their functions.</p> <p>B-2:4 Label components of the reproductive tracts of a cow and a sow.</p> <p>B-2:5 Match female reproductive organs to their functions.</p> <p>B-2:6 Choose the word or phrase to complete statements about poultry reproductive systems.</p> <p>B-2:8 Match hormones to their functions.</p> <p>B-3:1 Choose the word or phrase to complete statements about artificial insemination.</p> <p>B-3:9 Discuss the importance of the estrous cycle in AI.</p>
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	<p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-5:3 Discuss dystocia.</p> <p>B-6:7 Discuss cloning technology.</p> <p>D-1:7 State factors that determine dressing percentage of cattle.</p> <p>D-1:8 Select from a list of factors, which affect quality grade.</p>
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	<p>D-1:9 State factors on which yield grades are based.</p> <p>D-2:1 Choose the word or phrase to complete statements about market grades and classes of livestock.</p> <p>D-2:2 List factors that should be considered in selecting feeder cattle.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p> <p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p>
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	<p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:11 List factors that determine market classes of sheep.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:15 List qualifications for market grades of swine.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p> <p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p>
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	<p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p> <p>D-3:3 Discuss criteria for selecting poultry.</p> <p>D-3:4 Select chickens for meat, eggs, and breeding production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
<p>B. Diversity of species is developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology, that enhance survival and reproductive success in a particular environment.</p>	<p>B-1:2 Choose the word or phrase to complete statements about selecting livestock for desirable characteristics.</p> <p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>B-1:15 Select from a list, true statements about production testing.</p> <p>B-1:17 Discuss a specific advance in genetic engineering.</p>

	<p>B-2:1 Choose the word or phrase to complete statements about reproduction.</p> <p>B-2:2 Label components of the male reproductive tract.</p> <p>B-2:3 Match male reproductive organs to their functions.</p> <p>B-2:4 Label components of the reproductive tracts of a cow and a sow.</p> <p>B-2:5 Match female reproductive organs to their functions.</p> <p>B-2:6 Choose the word or phrase to complete statements about poultry reproductive systems.</p> <p>B-2:8 Match hormones to their functions.</p> <p>B-3:1 Choose the word or phrase to complete statements about artificial insemination.</p> <p>B-3:9 Discuss the importance of the estrous cycle in AI.</p>
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	<p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p> <p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-5:3 Discuss dystocia.</p> <p>B-6:7 Discuss cloning technology.</p> <p>D-1:7 State factors that determine dressing percentage of cattle.</p> <p>D-1:8 Select from a list of factors, which affect quality grade.</p>
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	<p>D-1:9 State factors on which yield grades are based.</p> <p>D-2:2 List factors that should be considered In selecting feeder cattle.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p> <p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p>
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	<p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p> <p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p> <p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p> <p>D-3:3 Discuss criteria for selecting poultry.</p>
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	<p>D-3:4 Select chickens for meat, eggs, and breeding production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
<p>C. Extension occurs when the environment changes and the adaptive characteristics of a species are insufficient to its survival.</p>	<p>B-1:2 Choose the word or phrase to complete statements about selecting livestock for desirable characteristics.</p> <p>B-1:14 Analyze Expected Progeny Difference (EPD) records and performance records.</p> <p>B-1:15 Select from a list, true statements about production testing.</p> <p>B-1:17 Discuss a specific advance in genetic engineering.</p> <p>B-2:1 Choose the word or phrase to complete statements about reproduction.</p> <p>B-2:2 Label components of the male reproductive tract.</p> <p>B-2:3 Match male reproductive organs to their functions.</p>

	<p>B-2:4 Label components of the reproductive tracts of a cow and a sow.</p> <p>B-2:5 Match female reproductive organs to their functions.</p> <p>B-2:6 Choose the word or phrase to complete statements about poultry reproductive systems.</p> <p>B-2:8 Match hormones to their functions.</p> <p>B-3:1 Choose the word or phrase to complete statements about artificial insemination.</p> <p>B-3:9 Discuss the importance of the estrous cycle in AI.</p> <p>B-4:1 Choose the word or phrase to complete statements about fertility and pregnancy testing.</p> <p>B-4:2 Discuss methods of pregnancy testing.</p> <p>B-4:3 Develop a chart showing pregnancy testing methods of different species.</p>
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	<p>B-4:4 List indications of pregnancy in a rectal examination.</p> <p>B-4:5 Pregnancy test a cow using a rectal examination.</p> <p>B-4:6 Select information about the stages of pregnancy.</p> <p>B-5:3 Discuss dystocia.</p> <p>B-6:7 Discuss cloning technology.</p> <p>D-2:2 List factors that should be considered In selecting feeder cattle.</p> <p>D-2:3 Define approximate age ranges for cattle.</p> <p>D-2:4 State indicators of yield grades.</p> <p>D-2:5 Choose the word or phrase to complete statements about factors and standards used in the preliminary yield grade schedule for cattle.</p> <p>D-2:6 Calculate yield grades for cattle carcasses.</p>
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	<p>D-2:7 Name qualifications for quality grades of cattle.</p> <p>D-2:8 Match slaughter grades of cattle to their descriptions.</p> <p>D-2:9 Select true statements about the qualifications for feeder grade cattle.</p> <p>D-2:10 Classify live cattle according to slaughter and feeder grades.</p> <p>D-2:12 Match characteristics of age groups of sheep to their descriptions.</p> <p>D-2:13 Name the criteria for the slaughter grades of lamb.</p> <p>D-2:14 Match slaughter grades of lamb to their description.</p> <p>D-2:16 Name the criteria for slaughter grades of swine.</p> <p>D-2:17 Match the slaughter grades of swine to their description.</p> <p>D-2:18 Match feeder grades of swine to their description.</p>
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	<p>D-2:19 Classify swine according to slaughter grades.</p> <p>D-2:20 Name market classes, criteria, and grades of poultry.</p> <p>D-2:21 Name grades, criteria, and classes of eggs.</p> <p>D-3:3 Discuss criteria for selecting poultry.</p> <p>D-3:4 Select chickens for meat, eggs, and breeding production.</p> <p>D-3:7 Determine the number and type of chicks to order for a poultry operation.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area XII.
The Interdependence of Organisms**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Matter on the earth cycles among the living and nonliving components of the biosphere.</p>	<p>B-1:18 Match mating systems to their descriptions, advantages, and disadvantages.</p> <p>B-5:13 Discuss care of the newborn calf, lamb, and piglet.</p> <p>C-5:2 State precautions for dehorning.</p> <p>C-5:10 List factors that determine the appropriate method of dehorning.</p> <p>C-5:16 State precautions and safety for castration.</p>
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<p>B. Energy flows through ecosystems in one direction.</p>	<p>B-1:18 Match mating systems to their descriptions, advantages, and disadvantages.</p> <p>B-5:13 Discuss care of the newborn calf, lamb, and piglet.</p> <p>C-5:2 State precautions for dehorning.</p> <p>C-5:10 List factors that determine the appropriate method of dehorning.</p> <p>C-5:16 State precautions and safety for castration.</p>
<p>C. Organisms both cooperate and compete in ecosystems.</p>	<p>B-1:18 Match mating systems to their descriptions, advantages, and disadvantages.</p> <p>B-5:13 Discuss care of the newborn calf, lamb, and piglet.</p>
<p>D. Living organisms have the capacity to produce populations of infinite size, but environments and resources limit population size.</p>	<p>B-1:18 Match mating systems to their descriptions, advantages, and disadvantages.</p> <p>B-5:13 Discuss care of the newborn calf, lamb, and piglet.</p>

**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area XIII.
Matter, Energy, and Organization in Living Systems**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. The complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain the organism.</p>	<p>B-5:1 Choose the word or phrase to complete statements about parturition and birth assistance.</p> <p>B-5:2 Match the stages of parturition to their characteristics, dams, and types of assistance.</p> <p>B-5:10 Select normal birth averages for swine.</p> <p>B-5:11 Discuss farrowing difficulties and the appropriate assistance.</p>
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	<p>C-3:5 Choose the word or phrase to complete statements about nutrients, sources, and their actions on animal physiology.</p> <p>C-3:7 Define the categories of feed.</p> <p>C-3:8 Select true statements about the composition of feeds.</p> <p>C-3:9 State uses of common additives.</p> <p>C-3:10 Compare the composition, nutrients, supplements, and additives in different commercial feeds.</p> <p>C-3:11 List factors to consider when buying feeds.</p> <p>C-3:12 Compare the cost of feeds with specific additives.</p> <p>C-3:15 Discuss energy values.</p> <p>C-3:16 Choose the word or phrase to complete statements about net-energy.</p> <p>C-3:17 Select true statements about balanced rations.</p>
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	<p>C-3:22 Choose the word or phrase to complete statements about poultry feed.</p> <p>C-3:23 Choose the word or phrase to complete statements about pasture requirements and grazing systems.</p> <p>C-3:24 Identify pasture requirements.</p>
<p>B. As matter and energy flow through different levels of organizations of living systems—cells , organs, organisms, and communities—and between living systems and the physical environment, chemical elements are recombined in different ways by different structures. Each recombination results in storage, use, and dissipation of energy into the environment as heat. Matter and energy are conserved in each change.</p>	<p>B-5:1 Choose the word or phrase to complete statements about parturition and birth assistance.</p> <p>B-5:2 Match the stages of parturition to their characteristics, dams, and types of assistance.</p> <p>B-5:10 Select normal birth averages for swine.</p> <p>B-5:11 Discuss farrowing difficulties and the appropriate assistance.</p> <p>C-3:5 Choose the word or phrase to complete statements about nutrients, sources, and their actions on animal physiology.</p> <p>C-3:7 Define the categories of feed.</p>

	<p>C-3:8 Select true statements about the composition of feeds.</p> <p>C-3:9 State uses of common additives.</p> <p>C-3:10 Compare the composition, nutrients, supplements, and additives in different commercial feeds.</p> <p>C-3:11 List factors to consider when buying feeds.</p> <p>C-3:12 Compare the cost of feeds with specific additives.</p> <p>C-3:15 Discuss energy values.</p> <p>C-3:16 Choose the word or phrase to complete statements about net-energy.</p> <p>C-3:17 Select true statements about balanced rations.</p> <p>C-3:22 Choose the word or phrase to complete statements about poultry feed.</p>
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	<p>C-3:23 Choose the word or phrase to complete statements about pasture requirements and grazing systems.</p> <p>C-3:24 Identify pasture requirements.</p> <p>D-3:8 Discuss poultry housing and equipment.</p>
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**Oklahoma Vocational Curriculum:
Embedded PASS Skills**

Animal Science: Science

**CIMC Developed/
Recommended Curriculum:** Animal Science LAPS

**PASS Skills
Core Curriculum Area:** Science

PASS Skills Sub-Core: Biology

**PASS Content Standard Area XIV.
The Behavior of Organisms**

Content Skill Knowledge

Matching Curriculum Objectives

<p>A. Organisms have behavioral responses to internal changes and to external stimuli.</p>	<p>B-1:21 Choose the word or phrase to complete statements about estrus.</p> <p>B-1:22 Match farm animals to their normal estrous cycle.</p> <p>B-1:23 Identify points in time on an estrous cycle chart.</p> <p>B-1:24 Determine the proper time for breeding.</p> <p>B-1:25 Choose the word or phrase to complete statements about heat synchronization.</p>
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	<p>B-1:26 Match livestock to their gestation periods.</p> <p>B-5:1 Choose the word or phrase to complete statements about parturition and birth assistance.</p> <p>B-5:2 Match the stages of parturition to their characteristics, dams, and types of assistance.</p> <p>B-5:10 Select normal birth averages for swine.</p> <p>B-5:11 Discuss farrowing difficulties and the appropriate assistance.</p> <p>C-2:1 Choose the word or phrase to complete statements about livestock diseases and parasites.</p> <p>C-2:2 Arrange in order the life cycle stages of an internal parasite.</p> <p>C-2:3 Match common internal parasites to their descriptions.</p> <p>C-2:4 Arrange in order the life cycle stages of external parasites.</p>
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	<p>C-2:5 Match common external parasites to their descriptions.</p> <p>C-2:6 Discuss parasite control.</p> <p>C-2:7 Determine prevention and controls for common parasites.</p> <p>C-2:8 Match common infectious diseases to their descriptions.</p> <p>C-2:9 Match common noninfectious diseases to their descriptions.</p> <p>C-2:10 Discuss disease prevention.</p> <p>C-3:5 Choose the word or phrase to complete statements about nutrients, sources, and their actions on animal physiology.</p> <p>C-3:7 Define the categories of feed.</p> <p>C-3:8 Select true statements about the composition of feeds.</p> <p>C-3:9 State uses of common additives.</p>
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	<p>C-3:10 Compare the composition, nutrients, supplements, and additives in different commercial feeds.</p> <p>C-3:11 List factors to consider when buying feeds.</p> <p>C-3:12 Compare the cost of feeds with specific additives.</p> <p>C-3:15 Discuss energy values.</p> <p>C-3:16 Choose the word or phrase to complete statements about net-energy.</p> <p>C-3:17 Select true statements about balanced rations.</p> <p>C-3:22 Choose the word or phrase to complete statements about poultry feed.</p> <p>C-3:23 Choose the word or phrase to complete statements about pasture requirements and grazing systems.</p> <p>C-3:24 Identify pasture requirements.</p>
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	<p>C-4:1 Choose the word or phrase to complete statements about immunity, vaccination, and drugs.</p> <p>C-4:3 Select from a list label requirements for animal health care products.</p> <p>C-4:7 Discuss anaphylaxis.</p> <p>C-4:24 Discuss using growth stimulants.</p> <p>C-4:27 Choose the word or phrase to complete statements about growth stimulants.</p> <p>C-4:28 State methods other than growth stimulants that improve the rate and efficiency of gain.</p> <p>C-5:2 State precautions for dehorning.</p> <p>C-5:10 List factors that determine the appropriate method of dehorning.</p> <p>C-5:16 State precautions and safety for castration.</p> <p>D-3:9 Choose the word or phrase to complete statements about poultry feed and flock health plans.</p>
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<p>B. Broad patterns of behavior exhibited by animals have adapted to ensure reproductive success.</p>	<p>B-1:21 Choose the word or phrase to complete statements about estrus.</p> <p>B-1:22 Match farm animals to their normal estrous cycle.</p> <p>B-1:23 Identify points in time on an estrous cycle chart.</p> <p>B-1:24 Determine the proper time for breeding.</p> <p>B-1:25 Choose the word or phrase to complete statements about heat synchronization.</p> <p>B-1:26 Match livestock to their gestation periods.</p> <p>B-5:1 Choose the word or phrase to complete statements about parturition and birth assistance.</p> <p>B-5:2 Match the stages of parturition to their characteristics, dams, and types of assistance.</p> <p>B-5:10 Select normal birth averages for swine.</p>
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	<p>B-5:11 Discuss farrowing difficulties and the appropriate assistance.</p> <p>C-3:5 Choose the word or phrase to complete statements about nutrients, sources, and their actions on animal physiology.</p> <p>C-3:7 Define the categories of feed.</p> <p>C-3:8 Select true statements about the composition of feeds.</p> <p>C-3:9 State uses of common additives.</p> <p>C-3:10 Compare the composition, nutrients, supplements, and additives in different commercial feeds.</p> <p>C-3:11 List factors to consider when buying feeds.</p> <p>C-3:12 Compare the cost of feeds with specific additives.</p> <p>C-3:15 Discuss energy values.</p> <p>C-3:16 Choose the word or phrase to complete statements about net-energy.</p>
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	<p>C-3:17 Select true statements about balanced rations.</p> <p>C-3:22 Choose the word or phrase to complete statements about poultry feed.</p> <p>C-3:23 Choose the word or phrase to complete statements about pasture requirements and grazing systems.</p> <p>C-3:24 Identify pasture requirements.</p> <p>C-4:24 Discuss using growth stimulants.</p> <p>C-4:27 Choose the word or phrase to complete statements about growth stimulants.</p> <p>C-4:28 State methods other than growth stimulants that improve the rate and efficiency of gain.</p> <p>D-3:8 Discuss poultry housing and equipment.</p> <p>D-3:9 Choose the word or phrase to complete statements about poultry feed and flock health plans.</p>
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ANIMAL SCIENCE

SUMMARY

SUMMARY
PASS Skills in this particular analysis of
Vocational Curriculum

Curriculum: Animal Science LAPS

PASS: Math—Algebra I

PASS Summary and Strengths

The core curriculum area met a minimal amount of PASS standard requirements.

PASS Standards/Skills Not Addressed

Of the four PASS content standards four were addressed. Of the twenty-three content skills within the PASS content standards seven were addressed. A number of PASS items need to be added to this curriculum to meet all relevant PASS requirements.

SUMMARY
PASS Skills in this particular analysis of
Vocational Curriculum

Curriculum: Animal Science LAPS

PASS: Science—Biology

PASS Summary and Strengths

The core curriculum area met the majority of PASS standard requirements. Of the fourteen PASS content standards twelve were addressed. Of the forty-seven content skills within the PASS content standards thirty-seven were addressed.

PASS Standards/Skills Not Addressed

AREA III—Experimenting

- A.** Arrange the steps of a scientific problem in logical order.
- B.** Identify the independent variables, dependent variables, and control in an experimental set-up.
- C.** Use mathematics to show relationships within a given set of observations.
- D.** Identify a hypothesis for a given problem.

AREA V— Communicating

- A.** Prepare a written report describing the sequence, results, and interpretation of an investigation or event.

AREA VI—Modeling

- C.** Compare a given model to the real world.

AREA VIII—Inquiry

- A.** Formulate a testable hypothesis and design an appropriate experiment relating to the world.
- B.** Design and conduct scientific investigations in which variables are identified and controlled.
- C.** Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.
- D.** Inquiries should lead to the formulation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence for the investigation) and arguments that encourage the revision of their explanations, leading to further inquiry.

ANIMAL SCIENCE

ADDENDUM

ADDENDUM

PASS Skills Analysis of Vocational Curriculum Animal Science

PASS Requirements—Supplement Suggestions

Science—Biology	<i>Area III—Experimenting</i>
	A. Lab exercise similar to or reference to: Exercise 2 (p. 13-21) of Delmar Lab Manual, Exploring Agriscience (scientific method)
	B. Prepare an experiment with chickens—feed experiment that has students identify the three areas: Using unit C-2 and/or C-3 discuss how pharmaceuticals and feeds are tested.
	C. Calculate prices for selling and break even when given specific observations: Objective 12 & 13 of unit D-1 Animal Science—Marketing Livestock.
	D. Make observations and give details of an unhealthy animal to form an hypothesis and treatment: Using objective 3,4,5,6, 12 & 15 of unit C-1 Animal Science—Animal Health Care.
	<i>Area V—Communicating</i>
	A. Develop assignment sheet for students to document how they would select livestock form a group, given information on performance & opportunity for live evaluation in a written report (judging contest): Using part of Animal Science unit B-1, Selecting & Breeding Livestock.

	<i>Area VI—Modeling</i>
	C. Develop assignment sheet in the form of a model on the life cycle of an internal parasite: Using unit C-2 objective 2.
	<i>Area VIII—Inquiry</i>
	A. See area III item A
	B. Have students design a investigation to determine an outcome (best cattle feed): Using Nutrition Feeds and Additives section C-3.
	C. Develop a assignment sheet for students to display data collected on four animals in a table and analyze: Using Animal Health Care unit C-1, job sheets 1,2 & 3.
	D.

NOTE: supplement information to meet PASS requirements using assignment sheets, job sheets, etc.

ANIMAL SCIENCE

SUPPLEMENT SAMPLE

Name _____ Score _____

OBJECTIVE

Describe the sequence, results, and interpretation of a livestock selection investigation.

PASS Information

Core
Sub-Core
Standard

Science
Biology
Area V — Communicating
A — Prepare a written report describing the sequence, results, and interpretation of an investigation or event.

INSTRUCTIONS

You are going to investigate and compare several head of livestock for the potential purchase of breeding stock. Then you will select the one you believe to be best and write a report on your investigative process, results, and interpretations.

1. Select a type of livestock to investigate. It can be traditional or exotic.

Livestock type selected _____

2. Gather, record, and analyze appropriate information on at least 4 different animals. Information should include both
 - Known performance data, and
 - Results of live inspection and evaluation
3. Based on the data you have gathered, decide which animal, if any, you would want to purchase.
4. Create a report that has the following parts:
 - A description of the process or sequence of steps you go through to carry out this investigation
 - The performance and descriptive inspection data or information you obtain for each animal
 - Your purchase decision

- A rationale for your decision based on your interpretation of your data

✓ **NOTE:** Produce your report with a word processor, if possible. Use data tables to report your performance and descriptive data for the livestock. Attach your finished report to this Assignment Sheet and turn it in to your instructor.