

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.1 Differentiate between ruminants and non-ruminants.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address ruminants and non-ruminants only.

### Stimulus Attributes:

Stimulus may address the correct and incorrect differences between ruminants and non-ruminants.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect correct and incorrect differences between ruminants and non-ruminants in stimulus.

### Sample Item:

Stimulus: In a paragraph, describe at least two differences between ruminants and non-ruminants. Provide one example of a ruminant and non-ruminant.

Rubric:

4 Points	The response includes a thorough description of at least two differences between ruminants and non-ruminants. The response includes a correct example of a ruminant and a non-ruminant. The response is detailed and well written.
3 Points	The response includes a reasonable description of at least two differences between ruminants and non-ruminants. The response includes an example of a ruminant and a non-ruminant. The response may have inaccuracies or may be incomplete. The response is somewhat clear with few grammatical errors.
2 Points	The response includes a description of at least one difference between ruminants and non-ruminants. The response includes an example of a ruminant and/or a non-ruminant. The response may be incorrect or incomplete. The response is somewhat unclear and may have multiple grammatical errors.
1 Point	The response does not include a description of at least one difference between ruminants and non-ruminants. The response does not include an example of a ruminant and/or a non-ruminant. The response is generally unclear and may have many grammatical errors.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.02 Differentiate between omnivorous, carnivores and herbivores.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of omnivores, carnivores, and herbivores.

### **Stimulus Attributes:**

Stimulus may address correct and incorrect differences between omnivorous, carnivores and herbivores.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect omnivorous, carnivores and herbivores in the stimulus.

### **Sample Item:**

What is an omnivore?

- A. an animal that eats other animals
- \* B. an animal that eats both animals and plants
- C. an animal that eats humans
- D. an animal that eats plants

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Compare omnivores, carnivores, and herbivores and identify the main factor that differentiates the three. Provide at least two examples of each type of animal: omnivore, carnivore, and herbivore.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of the three groups of animals. The response correctly indicates the primary difference between the three groups. The response provides at least two correct examples of each: an omnivore, a carnivore, and an herbivore.   |
| 3 Points | The response includes a basic understanding of the three groups. The response correctly indicates the primary difference between the three groups. The response provides correct examples in two of the three groups (at least two examples of an omnivore, two examples of a carnivore, or two examples of an herbivore). Some of the examples may be incorrect. |
| 2 Points | The response indicates a partial understanding of the three groups. The response correctly indicates the primary difference between the three groups. The response provides correct examples in at least one of the three groups (at least two examples of an omnivore, two examples of a carnivore, or two examples of an herbivore).                            |
| 1 Point  | The response does not correctly indicate the primary difference between the three groups. The response does not provide examples in one of the three groups (at least two examples of an omnivore, two examples of a carnivore, or two examples of an herbivore). The response includes incomplete and incorrect examples.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.03 Describe the basic nutritional requirements of selected species.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of nutritional requirements of cattle, sheep, hogs, goats, poultry, rabbits, and horses.

**Stimulus Attributes:**

Stimulus may address correct and incorrect basic nutritional requirements of livestock animals.  
Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect basic nutritional requirements of livestock animals in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: In a two paragraph response, describe the basic nutritional requirements of both a cow and a goat. The response should include at least two differences and two similarities in the nutritional requirements of each.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough and comprehensive understanding of the nutritional requirements of both a cow and a goat. The response includes at least two similarities and at least two differences in the nutritional requirements of the two.   |
| 3 Points | The response includes a basic understanding of the nutritional requirements of both a cow and a goat. The response includes at least two similarities and at least two differences in the nutritional requirements of the two. The response may include minor inaccuracies. The response has some details.                          |
| 2 Points | The response includes a partial understanding of the nutritional requirements of both a cow and a goat. The response includes at least one correct similarity and at least one correct difference in the nutritional requirements of the two. The response has few supporting details. The response may have incorrect information. |
| 1 Point  | The response does not include an understanding of the nutritional requirements of a cow and/or a goat. The response does not include at least one correct similarity and/or difference in nutritional requirements of the two.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.04 Analyze different feed labels and apply feed label regulations.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of feed labels for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address feed label regulations.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect feed label regulations in the stimulus.

### **Sample Item:**

Course Name: Animal Science and Services 3

Course Number: 8106220

### Item Specifications

The guaranteed analysis for Super Feed and Getter Better Feed has been provided. Which cattle feed would be **BEST** for quickly increasing the weight of your cattle?

	Super Feed	Getter Better Feed
Crude Protein	minimum..... 16.0%	minimum..... 20.0%
Lysine	minimum..... 1.2%	minimum..... 1.4%
Crude Fat	minimum..... 4.0%	maximum..... 0.01%
Crude Fiber	maximum..... 4.0%	maximum..... 10.0%
Calcium	minimum..... 0.8%	minimum..... 1.1%
Calcium	maximum..... 1.3%	maximum..... 1.3%
Phosphorus	minimum..... 0.65%	minimum..... 0.65%
Salt	minimum.....0.35%	minimum..... 1.0%
Salt	maximum.....0.85%	maximum..... 1.5%
Selenium	minimum..... 0.1 ppm	minimum..... 0.2 ppm
Zinc	minimum..... 150 ppm	minimum..... 100 ppm

- A. Super Feed, it has more Zinc
- B. Getter Better Feed, it has more crude protein
- \* C. Super Feed, it has more crude fat
- D. Getter Better Feed, it has more crude fiber

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.05 Balance a feed ration.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of feed rations for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### Stimulus Attributes:

Stimulus may address a balanced or unbalanced feed ration.

Stimulus may include graphs, charts, diagrams or pictures.

### Response Attributes:

Responses may reflect a balanced feed ration in the stimulus.

### Sample Item:

Stimulus: Choose an animal from the assigned list and list the requirements to balance a feed ration for that animal.

Rubric:

4 Points	The response includes a thorough description of the elements of balancing feed rations for animals. The response includes an identified animal.
3 Points	The response includes a basic description of the elements of balancing feed rations for animals. The response includes an identified animal. The response may have some inaccuracies.
2 Points	The response includes a partial description of the elements of balancing feed rations for animals. The response may not include an identified animal. The response may have incorrect elements or missing elements.
1 Point	The response does not include an accurate description of the elements of balancing feed rations for animals. The response has missing elements. The response does not identify an animal.



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.06 Schedule feed times for selected animals.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items are limited to the use of scheduled feeding times for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

**Stimulus Attributes:**

Stimulus may address correct or incorrect feeding times of selected livestock species.

Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect feeding times of selected livestock species in stimulus.

**Sample Item:**

What is the best time for feeding dairy cows?

- \* A. in the morning, after milking
- B. in the afternoon, before milking
- C. in the afternoon, after milking
- D. in the evening, before milking

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.07 Evaluate animal feed and feeding systems.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses and their feed and/or feeding systems.

### **Stimulus Attributes:**

Stimulus may address animal feed and feeding systems.

Stimulus may examine different animal feeders.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect animal feed and feeding systems in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Evaluate the major ingredients in a particular animal feed. Identify the type of feed, list at least six of the major ingredients, and give an example of alternative uses for three ingredients.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes the identification of the type of feed being evaluated. The response includes a list of at least six of the major ingredients in the selected feed. The response includes examples of alternative uses for at least three ingredients.  |
| 3 Points | The response includes the identification of the type of feed being evaluated. The response includes a list of at least four of the major ingredients in the selected feed. The response includes examples of alternative uses for at least two ingredients. The response may have incorrectly identified major ingredients or alternative uses. |
| 2 Points | The response includes the identification of the type of feed being evaluated. The response includes a list of at least two of the major ingredients in the selected feed. The response includes examples of alternative uses for at least one ingredient. The response may have incorrectly identified major ingredients.                       |
| 1 Point  | The response includes the identification of the type of feed being evaluated. The response does not include a list of at least two of the major ingredients in the selected feed. The response does not include an example of an alternative use for at least one ingredient.   |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.08 Measure and add medication to feed as prescribed.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items are limited to the use of medication measurement for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### Stimulus Attributes:

Stimulus may address correctly and incorrectly measuring and adding medication to feed as prescribed.

Stimulus may examine different medications found in feeds.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect measuring and adding medication to feed as prescribed in the stimulus.

### Sample Item:

The drug ractopamine increases the production of lean meat by reducing fat in animals. Ractopamine is added to 60 to 80 percent of the feed for which animal group?

- A. cattle
- B. mutton
- C. poultry
- \* D. swine

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 23.0 Identify the different digestive systems of animals and the nutritional requirements of selected species.

**Benchmark:** 23.09 Formulate amount to feed individual animals.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the use of feed formulations for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

**Stimulus Attributes:**

Stimulus may address correct or incorrect amounts to feed individual animals.

Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect the amount to feed individual animals.

**Sample Item:**

What would **NOT** be considered when formulating the amount to feed each pig on a farm?

- A. the purpose for the pig
- B. the sex of the pig
- C. the desired weight of the pig
- \* D. the breed of the pig

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.01 Describe the male and female reproductive systems.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to male and female reproductive systems of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address male and female reproductive systems.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect the male and female reproductive systems addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Describe the male and female reproductive systems of hogs. Provide at least three similarities and three differences between the two systems.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response thoroughly describes the male and female reproductive system of hogs. The response includes at least three correct similarities and at least three correct differences between the two systems.  |
| 3 Points | The response describes the male and female reproductive system of hogs. The response includes at least two correct similarities and at least two correct differences between the two systems. The response includes some details and may have minor inaccuracies. |
| 2 Points | The response describes the male and female reproductive system of hogs. The response includes at least one correct similarity and at least one correct difference between the two systems. The response may have few correct details.                             |
| 1 Point  | The response inaccurately describes the male and female reproductive system of hogs. The response does not include at least one correct similarity and/or at least one correct difference between the two systems. The response includes many incorrect details.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.02 Determine gender of animals.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items are limited to gender of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address the gender of an animal.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the gender of an animal addressed in the stimulus.

Responses may include gender specific characteristics.

### **Sample Item:**

Which description provides a correct interpretation of a boar?

- A. a male animal which is castrated and shows physical traits of the uncastrated male
- B. a male animal which is castrated before reaching sexual maturity
- C. a male bovine castrated while young, in which physical traits of the bull have not developed
- \* D. a male swine that has not been castrated



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.03 Determine appropriate age for breeding.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the breeding age of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address correct and incorrect ages for breeding livestock.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect the appropriate age for breeding livestock.

### **Sample Item:**

What is the recommended age to breed a beef heifer?

- A. 6-7 months
- B. 9-12 months
- \* C. 12-15 months
- D. 15-18 months

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.04 Identify gestation length.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the gestation length of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

**Stimulus Attributes:**

Stimulus may address correct and incorrect gestation lengths for different livestock species.  
Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect the gestation length for different livestock species in the stimulus.

**Sample Item:**

What is the average gestation length for a goat?

- \* A. 151 days
- B. 161 days
- C. 171 days
- D. 181 days

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.05 Describe estrous cycle.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the estrous cycle of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may correctly or incorrectly address the estrous cycle in different livestock species.  
Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect the estrous cycle in different livestock species in the stimulus.

### **Sample Item:**

What is the average duration of the estrous cycle of a swine?

- A. 6-10 days
- \* B. 17-21 days
- C. 22-26 days
- D. 31-35 days

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.06 Describe breeding techniques.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to breeding techniques of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may correctly or incorrectly address breeding techniques.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the breeding techniques in the stimulus.

### **Sample Item:**

Which statement describes artificial insemination?

- A. a tube-like device used to collect semen from male animals
- \* B. the placing of sperm in the reproduction tract of the female by means other than that of natural breeding
- C. removing an embryo from a female of superior genetics and placing the embryo in the reproduction tract of a female of inferior genetics
- D. the period of sexual excitement when the female will accept the male

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.07 Select male and female for breeding.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the breeding traits of cattle, sheep, hogs, goats, poultry, rabbits, and/or horse.

**Stimulus Attributes:**

Stimulus may correctly or incorrectly address selecting male and female animals for breeding.  
Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect the selection of male and female animals for breeding in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Discuss the steps and considerations taken when selecting sheep for breeding. The response should include at least four steps/considerations taken to properly select a male and female sheep for breeding.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes at least four steps/considerations taken to properly select sheep for breeding. The response thoroughly discusses all four steps/considerations and presents the correct sequence. The response has multiple supports.                                    |
| 3 Points | The response includes at least four steps/considerations taken to properly select sheep for breeding. The response discusses at least three steps/considerations and presents the correct sequence. The response has some details and may have minor inaccuracies or omissions. |
| 2 Points | The response includes at least three steps/considerations taken to properly select sheep for breeding. The response discusses at least two steps/considerations in correct sequence. The response may have multiple inaccuracies and omissions.                                 |
| 1 Point  | The response may include at least two steps/considerations taken to properly select sheep for breeding. The response may discuss at least one step/consideration to be made. The response has few correct details.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.08 Recognize the proper care for breeding stock.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to proper care for breeding cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address proper and improper care for breeding stock.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the proper care for breeding stock in the stimulus.

### **Sample Item:**

What should be done to properly care for a pregnant mare?

- A. Keep her restrained to prevent injury to the fetus.
- \* B. Ensure that she receives regular exercise.
- C. Double her feed as she is eating for two.
- D. Reduce her feed to prevent overeating.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.09 Recognize the proper care for newborn.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to newborn cattle, sheep, hogs, goat, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address proper and improper care for newborn animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the proper care for newborn animals in the stimulus.

### **Sample Item:**

Male piglets not selected for breeding should be castrated, preferably at the age of three to four weeks.

What is **NOT** a purpose for castrating male piglets?

- A. to enhance production of quality meat
- B. to keep them from mating with their litter mates
- C. to maintain a mild manner in the swine
- \* D. to slow down their appetite



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 24.0 Explain the reproductive system and breeding of selected animals.

**Benchmark:** 24.10 Compare and contrast reproduction between different animal species.

**Depth of Knowledge:** Moderate Complexity, High Complexity.

**Item Types:** Constructed Response

**Content Limits:** Items should address reproduction differences and similarities between cattle, sheep, hogs, goats, poultry, rabbits, and horses.

### **Stimulus Attributes:**

Stimulus may correctly and incorrectly address reproduction in the different animal species.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the reproduction in the different animal species in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

Stimulus: In two paragraphs, compare the reproduction system between two different animal species. Select and describe at least 2 differences and 2 similarities between the two.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of the animal reproduction systems. The response includes the identification of two different animal species for comparison/contrast. The response includes at least two correct differences and two correct similarities between the reproduction systems. The response includes many details.  |
| 3 Points | The response includes a basic understanding of the reproduction system. The response includes the identification of two different animal species for comparison/contrast. The response includes at least two correct differences and/or at least two correct similarities between the reproduction systems. The response may have incorrect differences or similarities. The response may have omitted differences or similarities. |
| 2 Points | The response includes a partial understanding of the reproduction system. The response includes the identification of two different animal species for comparison/contrast. The response includes at least one correct difference and at least one correct similarity between the reproduction systems. The response may have incorrect differences/similarities and omissions.   |
| 1 Point  | The response includes a poor understanding of the reproduction system. The response may include the identification of two different animal species for comparison/contrast. The response may include at least one correct difference or at least one correct similarity between the reproduction systems. The response has few correct details.   |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.01 Describe the importance of preventive medicine for animal health.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to preventive medicine for cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### Stimulus Attributes:

Stimulus may address the importance of preventive medicine or the lack of preventive medicine for animal health.

Stimulus may include graphs, charts, diagrams or pictures.

### Response Attributes:

Responses may reflect the importance of preventive medicine for animal health addressed in the stimulus.

### Sample Item:

Stimulus: In three paragraphs, describe the importance of preventive medicine used in animal health. Provide at least 4 factors that are important and thoroughly describe how those factors play a part in animal health.

Rubric:

- |          |  |
|----------|--|
| 4 Points | The response identifies and thoroughly describes the importance of at least 4 correct factors that are significant in preventive medicine for animal health. The response is well supported.   |
| 3 Points | The response identifies and describes the importance of at least 3 correct factors that are significant in preventive medicine for animal health. The response has some details and may have some inaccuracies.  |
| 2 Points | The response identifies and partially describes the importance of at least 2 correct factors that are significant in preventive medicine for animal health. The response has few details. The response may incorrectly identify or omit important factors. |
| 1 Point  | The response may not identify or describe the importance of at least 1 correct factor that is significant in preventive medicine for animal health. The response omits important factors or incorrectly identifies them.                                   |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.02 Recognize healthy animals.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits** Items are limited to healthy cattle, sheep, hogs, goats, poultry, rabbits, and horse.

### Stimulus Attributes:

Stimulus may address the attributes of healthy and unhealthy animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect attributes of a healthy animal addressed in the stimulus.

### Sample Item:

What are the attributes of a healthy goat?

- A. clear eyes, shiny coat, temperature 105<sup>o</sup>f, tail up
- \* B. shiny coat, pulse 70 beats per min, temperature 103<sup>o</sup>f, tail up
- C. clear eyes, tail down, pulse 60 beats per min, shiny coat
- D. shiny coat, tail down, temperature 102.5<sup>o</sup>f, pulse 65 beats per min

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.03 Research common diseases of animals.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits** Items are limited to the common diseases of cattle, sheep, hogs, goats, poultry, rabbits, and horses.

### **Stimulus Attributes:**

Stimulus may address the common diseases of livestock animals.

Stimulus may examine the common diseases of livestock animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

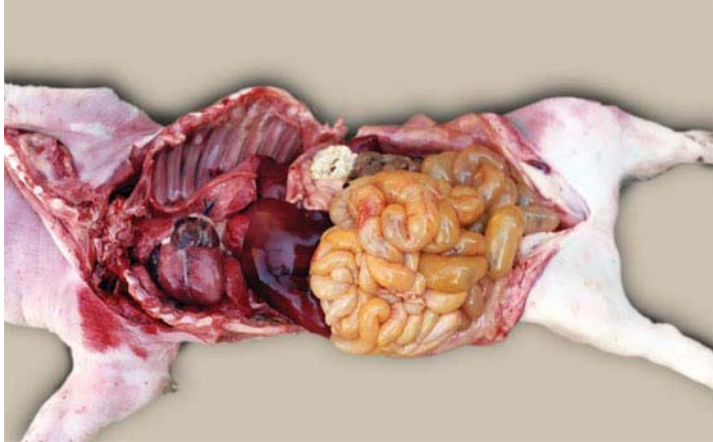
### **Response Attributes:**

Responses may reflect on the common diseases of livestock animals addressed in the stimulus.

### **Sample Item:**

### Item Specifications

Stimulus: Given the following picture of an autopsy, you have researched the common illness and found the answer to be Blackleg. Describe at least three symptoms that you would have likely researched in order to come to that conclusion?



**Rubric:**

- 4 Points      The response includes at least three viable symptoms predominantly associated with Blackleg (answers may include but are not limited to dark coloring, gas bubbles, presumed foul odor, etc.). The response includes a thorough and accurate interpretation of the symptoms associated with Blackleg.
  
- 3 Points      The response includes at least two viable symptoms predominantly associated with Blackleg (answers may include but are not limited to dark coloring, gas bubbles, presumed foul odor, etc.). The response includes a thorough and accurate interpretation of the symptoms associated with Blackleg.
  
- 2 Points      The response includes at least two viable symptoms predominantly associated with Blackleg (answers may include but are not limited to dark coloring, gas bubbles, presumed foul odor, etc.). The response does not include a correct interpretation of the symptoms associated with Blackleg.
  
- 1 Point        The response does not include at least one viable symptom predominantly associated with Blackleg (answers may include but are not limited to dark coloring, gas bubbles, presumed foul odor, etc.). The response may not include an interpretation of the symptoms associated with Blackleg.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.04 Describe vaccinations available for disease prevention and vaccination procedures.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits** Items are limited to vaccinations available for disease prevention and vaccination procedures of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### Stimulus Attributes:

Stimulus may address vaccinations available for disease prevention and vaccination procedures.

Stimulus may examine vaccination procedures.

Stimulus may include graphs, charts, diagrams or pictures.

### Response Attributes:

Responses may reflect the vaccinations available for disease prevention and vaccination procedures addressed in the stimulus.

### Sample Item:

Why should you boil syringes or needles used for live vaccines?

- A. They are sensitive to cold.
- B. They are sensitive to sunlight.
- C. They are not 100% effective.
- \* D. They are resistant to disinfectants.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.05 Evaluate and report health conditions of animals.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response

**Content Limits** Items are limited to the shipping of large animals and their health certificates.

### Stimulus Attributes:

Stimulus may examine healthy and unhealthy conditions of animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect the health conditions of animals addressed in the stimulus.

### Sample Item:

Stimulus: After having your cattle evaluated, you have noted that one of your steers has the following notations: conformation, over condition, sound, and action. Describe an example of each trait and identify the trait listed that does not exist in a healthy steer.

Rubric:

4 Points	The response includes the thorough and accurate description of each of the four traits. The response includes the identification that over condition is not a trait of a healthy steer.
3 Points	The response includes the thorough and accurate description of at least three of the four traits. The response includes the identification that over condition is not a trait of a healthy steer.
2 Points	The response includes the accurate description of at least two of the four traits. The response does not include the identification that over condition is not a trait of a healthy steer.
1 Point	The response includes the accurate description of less than two of the four traits. The response does not include the identification that over condition is not a trait of a healthy steer.



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.06 Evaluate and report common ailments of animals (diseases, disorders associated with feeding, stress, internal and external parasites).

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response

**Content Limits:** Items are limited to the ailments of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address common ailments of animals.

Stimulus may examine common ailments of animals (diseases, disorders associated with feeding, stress, internal and external parasites).

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the common ailments of animals addressed in the stimulus.

### **Sample Item:**

### **Item Specifications**

Stimulus: Poultry are commonly infected with mites. In the picture a scaly leg mite is the cause of the infection. Evaluate and describe at least two common causes of scaly leg mites in poultry and describe at least one precaution or treatment that can be done against scaly leg mites.



**Rubric:**

- |          |   |
|----------|---|
| 4 Points | The response includes a comprehensive understanding of common illnesses of animals and in particular the traits associated with scaly leg mites. The response includes two common causes of scaly leg mites. The response includes at least one precaution or treatment of scaly leg mites.                         |
| 3 Points | The response includes an understanding of common illnesses of animals and in particular the traits associated with scaly leg mites. The response includes at least one common cause of scaly leg mites. The response includes at least one precaution or treatment of scaly leg mites.                              |
| 2 Points | The response includes a partial understanding of common illnesses of animals and in particular the traits associated with scaly leg mites. The response includes at least one common cause of scaly leg mites. The response does not include at least one correct precaution or treatment of scaly leg mites.       |
| 1 Point  | The response may not include a correct understanding of common illnesses of animals and in particular the traits associated with scaly leg mites. The response may not include at least one common cause of scaly leg mites. The response does not include at least one precaution or treatment of scaly leg mites. |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.07 Administer prescribed oral medications.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items are limited to administration of prescribed oral medications to cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address how to give oral medications.

Stimulus may examine correct and incorrect steps to giving oral medications.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect how to give oral medications addressed in the stimulus.

### **Sample Item:**

What is the **BEST** way to administer oral medication to a bovine?

- A. Pour medicine over the cattle mash.
- B. Add medicine in the bovine's water supply.
- C. Hold up its head and pour medicine in the bovine's mouth.
- \* D. Pass a tube through the bovine's nose and pump medicine into its stomach.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.08 Describe the process for administering medications by injection.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items are limited to the process for administering medications to cattle, sheep, hogs, goats, poultry, rabbits, and/or horses by injection.

### Stimulus Attributes:

Stimulus may address administering medications by injection.

Stimulus may examine correct and incorrect steps to administering medications by injection.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect administering medications by injection addressed in the stimulus.

### Sample Item:

Which type of injection places the vaccine between the skin and muscle tissue?

- A. intradermal
- B. intra-muscular
- C. intra-stomach
- \* D. subcutaneous

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.09 Describe the procedure for safe disposal of medications.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address the procedure for the safe disposal of cattle, sheep, hog, goat, poultry, rabbit, and/or horse medications.

### **Stimulus Attributes:**

Stimulus may address the safe and unsafe disposal of livestock medications.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect the safe disposal of livestock medications addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

**Stimulus:** Describe at least three general procedures associated with the safe disposal of medications for animals. Include a thorough rationale as to why the safe disposal of medications is important.

**Rubric:**

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of the procedures for the safe disposal of medications. The response includes at least three correct general procedures associated with the safe disposal of medications. The response includes the thorough rationale for why safe disposal of medications is important.  |
| 3 Points | The response includes an understanding of the procedures for safe disposal of medications. The response includes at least two correct general procedures associated with the safe disposal of medications. The response includes the rationale for why safe disposal of medications is important. The response may have minor inaccuracies.   |
| 2 Points | The response includes a partial understanding of the procedures for safe disposal of medications. The response includes at least one correct general procedure associated with the safe disposal of medications. The response includes the rationale for why safe disposal of medications is important. The response may have multiple inaccuracies or omissions.                     |
| 1 Point  | The response includes a minimal understanding of the procedures for the safe disposal of medications. The response may not include at least one correct general procedure associated with the safe disposal of medications. The response does not include the rationale for why safe disposal of medications is important. The response may have incorrect information and omissions. |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.10 Discuss the terms immunology and active and passive immunity.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should address immunology, active and passive immunity of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address one or more of the terms: immunology and active and passive immunity.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect immunology and active and passive immunity as addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Consider the terms immunology and active/passive immunity. Compare the terms and present at least two differences between them and present a situation in which each one would be appropriately used.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of the terms immunology and active and passive immunity. The response includes the listing of at least two differences between the terms considered. The response includes the thorough description of each term being used in an appropriate situation.   |
| 3 Points | The response includes a basic understanding of the terms immunology and active and passive immunity. The response includes the listing of at least two differences between the terms considered. The response includes the description of each term being used in an appropriate situation.   |
| 2 Points | The response includes a partial understanding of the terms immunology and active and passive immunity. The response includes the listing of at least one difference between the terms considered. The response includes the description of each term being used in an appropriate situation.  |
| 1 Point  | The response includes a poor understanding of the terms immunology and active and passive immunity. The response may not include the listing of at least one difference between the terms considered. The response does not include the description of each term being used in an appropriate situation. The response may be incorrect or have omissions. |



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 25.0 Demonstrate knowledge of preventive medicine and disease control.

**Benchmark:** 25.11 Describe procedures for periodic health check-up.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address periodic health check-ups of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address reasons for periodic health check-ups.

Stimulus may address the consequences related to failures in health check-ups.

Stimulus may address procedures at periodic health check-ups.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect reasons for periodic health check-up addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: In a one page response, describe at least three periodic health procedures and include how often the procedures listed should be performed.

Rubric:

- |          |  |
|----------|--|
| 4 Points | The response correctly includes at least three periodic health procedures. The response includes the correct description of how often at least three periodic health procedures should be performed.   |
| 3 Points | The response correctly includes at least two periodic health procedures. The response includes the correct description of how often at least two periodic health procedures should be performed. The response may have inaccuracies or omissions.  |
| 2 Points | The response correctly includes at least one periodic health procedure. The response includes the correct description of how often at least one periodic health procedure should be performed. The response may include incorrect health procedures or omit some.                                  |
| 1 Point  | The response does not include the correct identification of at least one periodic health procedure. The response does not include the correct identification of at least one time frame for a periodic health procedure to be performed. The response indicates a poor understanding of the topic. |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 26.0 Describe internal and external parasites and control methods.

**Benchmark:** 26.01 Compare and contrast internal and external parasites of selected animals and use a microscope for selected practices.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Constructed Response

**Content Limits:** Items should address internal and external parasites of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address internal and external parasites in livestock.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect internal and external parasites addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Select one common internal and one common external parasite that are prevalent in cattle. Using a microscope to view the parasites, describe at least two similarities and two differences between the two types of parasites.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of the common internal and external parasites common to cattle. The response includes the identification of both an internal and external parasite. The response includes at least 2 similarities and 2 differences between the two selected parasite types.   |
| 3 Points | The response includes a basic understanding of the common internal and external parasites common to cattle. The response includes the identification of both an internal and external parasite. The response includes at least 2 similarities and 2 differences between the two selected parasite types. The response may have some inaccuracies.   |
| 2 Points | The response includes a partial understanding of the common internal and external parasites common to cattle. The response includes the identification of both an internal and external parasite. The response includes at least 1 similarity and/or 1 difference between the two selected parasite types. The response may not include the listing of characteristics associated with a microscopic view of an internal and external parasite. The response may include an incorrect comparison of parasites or omissions. |
| 1 Point  | The response may not include the correct identification of an internal and/or external parasite. The response may not include at least 1 correct similarity and/or 1 difference between the two selected parasite types. The response does not include the listing of characteristics associated with a microscopic view of an internal and external parasite. The response includes a poor understanding of the common parasites prevalent in cattle. The response may list incorrect or omit parasites.                   |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 26.0 Describe internal and external parasites and control methods.

**Benchmark:** 26.02 Research methods of parasite prevention and control.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Constructed Response

**Content Limits:** Items should address the methods of parasite prevention and control in cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address correct and incorrect methods of parasite prevention.

Stimulus may address correct and incorrect methods of parasite control.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect parasite prevention and control addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Pasture rotation is a method used to control parasites. In a paragraph, explain how pasture rotation is used to control parasites.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The student demonstrates a thorough understanding of the relationship between pasture rotation and parasite control. The answer should include practices such as moving animals to pastures with minimal numbers of parasites, deworming animals prior to moving, and keeping young animals in clean pastures. The response is clearly written and had few grammatical errors.  |
| 3 Points | The student demonstrates a partial understanding of the relationship between pasture rotation and parasite control. The answer should include practices such as moving animals to pastures with minimal numbers of parasites, deworming animals prior to moving, and keeping young animals in clean pastures. One of the practices may be incorrectly or partially described. The response is somewhat clear and may have minimal grammatical errors. |
| 2 Points | The student demonstrates an understanding of the relationship between pasture rotation and parasite control. The answer should include practices such as moving animals to pastures with minimal numbers of parasites, deworming animals prior to moving, and keeping young animals in clean pastures. Many of the practices may be incorrectly or partially described. The response is somewhat unclear and may have multiple grammatical errors.    |
| 1 Point  | The student demonstrates a poor understanding of the relationship between pasture rotation and parasite control. Much of the practices are incorrectly described or are missing. The response is generally unclear and may have many grammatical errors.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 26.0 Describe internal and external parasites and control methods.

**Benchmark:** 26.03 Describe the process for fecal sample collection, slide preparation, and examination.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address the process of fecal sample collection, slide preparation and examination of cattle, sheep, hogs, goats, poultry, rabbits, and horse fecal matter.

### Stimulus Attributes:

Stimulus may address correct and incorrect processes for fecal sample collection of livestock.

Stimulus may address correct and incorrect processes for slide preparation of livestock fecal matter.

Stimulus may address correct and incorrect processes for examination of livestock fecal sample.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect the process for fecal sample collection, slide preparation, and examination addressed in the stimulus.

### Sample Item:

When collecting a fecal sample for examination from a horse, what is an important consideration during the collection process?

- \* A. whether or not the collection container is clean
- B. whether or not the animal is under duress
- C. what type of examination will be done
- D. whether or not worm eggs are present

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.01 Groom selected animals for exhibition.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should be limited to the animals used in common animal exhibitions.

### Stimulus Attributes:

Stimulus may address the correct and incorrect grooming techniques of show animals.  
Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect the correct and incorrect grooming of show animals addressed in the stimulus.

### Sample Item:

Task: Demonstrate the proper grooming techniques for a pig being prepared to show.

Rubric:

4 Points	The student demonstrates a thorough understanding of pig show grooming criteria including using mild soap to clean, clipping with livestock clippers, removing dirt or sawdust that may go on the pig in the ring. All steps are performed correctly without coaching.
3 Points	The student demonstrates an understanding of pig show grooming criteria including using mild soap to clean, clipping with livestock clippers, removing dirt or sawdust that may go on the pig in the ring. All steps are performed but they may not be correct or in the right order. Some coaching is needed.
2 Points	The student demonstrates a partial understanding of pig show grooming criteria including using mild soap to clean, clipping with livestock clippers, removing dirt or sawdust that may go on the pig in the ring. The procedures are performed with multiple errors. Coaching is needed.
1 Point	The student demonstrates a limited understanding of pig show grooming criteria including using mild soap to clean, clipping with livestock clippers, removing dirt or sawdust that may go on the pig in the ring. The student requires coaching to perform the steps.



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.02 Train animals for show and/or exhibition.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should address training and showing cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address the correct and incorrect training of animals for show.

Stimulus may examine the correct and incorrect ways to show animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect training animals for show addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Task: Demonstrate effective training techniques and common requirements for showing sheep.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The student demonstrates a thorough understanding of animal training by clearly explaining and demonstrating the correct training techniques and requirements for showing sheep. All techniques are performed with few errors or teacher assistance.  |
| 3 Points | The student demonstrates a basic understanding of animal training by explaining and demonstrating most of the correct training techniques and requirements. The techniques are performed with minimal errors and some teacher assistance is required.   |
| 2 Points | The student demonstrates a partial understanding of animal training by explaining and demonstrating some of the training techniques and requirements for showing sheep. The techniques are performed with multiple errors and some requirements may be missing. Teacher assistance is needed. |
| 1 Point  | The student demonstrates a minimal understanding of animal training by explaining and demonstrating few, if any of the training techniques and requirements for showing sheep. The student required major teacher assistance.   |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.03 Demonstrate proper techniques for exhibiting an animal.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should address proper techniques for exhibiting cattle, sheep, hogs, goats, poultry, rabbits, and horse species.

### Stimulus Attributes:

Stimulus may address the proper and improper techniques for exhibiting livestock species.  
Stimulus may examine the proper and improper techniques for exhibiting livestock species.  
Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect the proper techniques for exhibiting livestock species addressed in the stimulus.

### Sample Item:

Task: Demonstrate the proper techniques for exhibiting cattle.

Rubric:

4 Points	The student demonstrates a complete, thorough, and accurate understanding and performance of the proper techniques for exhibiting cattle. All techniques are performed without errors or assistance.
3 Points	The student demonstrates an adequate understanding and performance of the proper techniques for exhibiting cattle. The techniques are performed with minimal errors. Some assistance may be needed.
2 Points	The student demonstrates a partial understanding and performance of the proper techniques for exhibiting cattle. The techniques are performed with multiple errors and some requirements may be missing. Teacher assistance is needed.
1 Point	The student may or may not demonstrate a partial understanding and/or performance of the proper techniques for exhibiting cattle. The student was unsuccessful without major teacher assistance.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.04 Demonstrate knowledge required to train selected animals to halter.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items should address the knowledge required to train cattle, sheep, hogs, goats, poultry, rabbits, and horses to halter.

### Stimulus Attributes:

Stimulus may address correctly and incorrectly haltering an animal.

Stimulus may examine to proper and improper techniques for haltering an animal.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect haltering an animal addressed in the stimulus.

### Sample Item:

When halter breaking cattle, what size and type of rope should be used?

- A. ¼ inch twisted nylon
- B. ¼ inch twisted hemp
- \* C. ½ inch twisted nylon
- D. ½ inch braided nylon

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.05 Measure animal growth using a scale.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should be limited to measuring cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

**Stimulus Attributes:**

Stimulus may address measuring animal growth correctly and incorrectly using a scale.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

**Response Attributes:**

Responses may reflect measuring animal growth using a scale addressed in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

**Stimulus:** Describe the steps necessary to weigh an animal. The response should identify the animal and include how to measure the animal's growth over multiple weightings.

**Rubric:**

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough description of the steps to take to weigh an animal. The response includes the identification of the animal being weighed. The response includes presenting a clear understanding of how growth can be tracked.  |
| 3 Points | The response includes a description of the steps to take to weigh an animal. The response includes the identification of the animal being weighed. The response includes presenting a reasonable understanding of how growth can be tracked. The response has some details and may have minor errors.         |
| 2 Points | The response includes a description of the steps to take to weigh an animal. The response may not include the identification of the animal being weighed. The response includes presenting an understanding of how growth can be tracked. The response may have incorrect steps or partially described steps. |
| 1 Point  | The response does not include a correct description of the steps to take to weigh an animal. The response does not identify the animal being weighed. The response does not include presenting an understanding of how growth can be tracked. The response has multiple errors.                               |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.06 Prepare animals for transport.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address preparing large cattle, sheep, hogs, goats, poultry, rabbits, and/or horses for transport.

### Stimulus Attributes:

Stimulus may address correctly and incorrectly preparing large livestock for transport.

Stimulus may examine proper and improper techniques for preparing large livestock for transport.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect preparing large livestock for transport addressed in the stimulus.

### Sample Item:

Stimulus: Describe at least four steps required when preparing a horse for safe transport across state lines. The response should be one page in length.

Rubric:

- |          |  |
|----------|--|
| 4 Points | The response includes a thorough description of at least four steps to take to prepare a horse for transport across state lines.   |
| 3 Points | The response includes a basic description of at least three steps to take to prepare a horse for transport across state lines. The response has some details. The response may include an incorrect step or the omission of one. |
| 2 Points | The response includes a thorough description of at least two steps to take to prepare a horse for transport across state lines. The response may have multiple incorrect steps or omissions. The response has few details.       |
| 1 Point  | The response includes the description of one or fewer steps to take to prepare a horse for transport across state lines. The response is lacking in details. Several steps are missing or incorrect.                             |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.07 Identify market outlets.

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address the local market outlets.

### **Stimulus Attributes:**

Stimulus may address different types of local market outlets.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect on the different market outlets addressed in the stimulus.

### **Sample Item:**

What are the types of market outlets for beef?

- A. terminal, auction, retail, electronic
- \* B. terminal, auction, direct, electronic
- C. wholesale, auction, direct, electronic
- D. wholesale, auction, retail, electronic



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.08 Describe methods of restraining, loading, handling, and transporting animals safely.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address the methods of restraining, loading, handling, and transporting cattle, sheep, hogs, goats, poultry, rabbits, and/or horses safely.

### Stimulus Attributes:

Stimulus may address restraining, loading, handling, and transporting animals safely and unsafely.

Stimulus may examine the proper and improper methods of restraining, loading, handling, and transporting animals safely.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### Response Attributes:

Responses may reflect restraining, loading, handling, and transporting animals safely addressed in the stimulus.

### Sample Item:

How should cattle be moved before loading?

- A. fast and quietly
- B. fast and loud
- C. slowly and loud
- \* D. slowly and quietly

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.09 Determine market grades of animals and animal products.

**Depth of Knowledge:** Low Complexity, Moderate Complexity

**Item Types:** Multiple Choice, Constructed Response

**Content Limits:** Items should address market grades of market animals and their products.

### **Stimulus Attributes:**

Stimulus may address market grades of animals and animal products.

Stimulus may examine correct and incorrect market grades of animals.

Stimulus may include graphs, charts, diagrams, video clips or pictures.

### **Response Attributes:**

Responses may reflect market grades of animals addressed in the stimulus.

### **Sample Item:**

What does the term *marbling* mean?

- \* A. the presence and distribution of intramuscular fat
- B. the amount and distribution of finish
- C. a term used to describe slaughter beef
- D. a term used to describe slaughter swine

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 27.0 Groom, exhibit and market animals.

**Benchmark:** 27.10 Analyze shipping and health certificates.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response

**Content Limits:** Items should address shipping and health certificates of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

### **Stimulus Attributes:**

Stimulus may address health certificates.

Stimulus may examine health certificates.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect health certificates addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Choose an animal from the assigned list and in two paragraphs, explain what is required for the animal to receive a health certificate.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The student has demonstrated a thorough understanding of the requirements to receive a health certificate by clearly describing the requirements for the chosen animal.   |
| 3 Points | The student has demonstrated a partial understanding of the requirements to receive a health certificate for the chosen animal. There may be minimal errors in the description.   |
| 2 Points | The student has demonstrated a minimal understanding of the requirements to receive a health certificate. Only a few requirements are described or there may be many errors in the description. The response may not include a specific animal. |
| 1 Point  | The student has demonstrated a poor understanding of the requirements to receive a health certificate. Most of the requirements are omitted or there are many errors in the description. The response may not include a specific animal.        |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 28.0 Maintain and analyze records.

**Benchmark:** 28.01 Maintain and analyze animal records.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items are limited to records of cattle, sheep, hogs, goats, poultry, rabbits, and/or horses.

**Stimulus Attributes:**

Stimulus may address records of livestock species.

Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect use of records addressed in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

**Stimulus:** In a one page response, describe the requirements for maintaining the animal records of cattle. Include what information requires analysis and describe a specific analysis that can be done on the cattle record.

**Rubric:**

- |          |  |
|----------|--|
| 4 Points | The response includes a thorough description of the requirements associated with maintaining animal records of cattle. The response includes the identification of and details of a specific analysis that would be done on a cattle record.   |
| 3 Points | The response includes a description of the requirements associated with maintaining animal records of cattle. The response includes the identification of and details of a specific analysis that would be done on a cattle record. The response may have incorrect details or analysis.                             |
| 2 Points | The response includes a partial description of the requirements associated with maintaining animal records of cattle. The response may not include the identification of and/or details of a specific analysis that would be done on a cattle record. The response may have incorrect or incomplete information.     |
| 1 Point  | The response may not include a description of the requirements associated with maintaining animal records of cattle. The response may not include the identification of or the details of a specific analysis that would be done on a cattle record. The response has incomplete, incorrect and missing information. |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 28.0 Maintain and analyze records.

**Benchmark:** 28.02 Discuss the legal requirements of maintaining animal health records. Maintain and analyze animal health records.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response

**Content Limits:** Items should be limited to the legal requirements of maintaining health records of cattle, sheep, hogs, goats, poultry, rabbits, and horses.

**Stimulus Attributes:**

Stimulus may address the legal requirements of maintaining and analyzing animal health records.  
Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect the legal requirements of maintaining animal health records, and maintain and analyze animal health records addressed in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Discuss at least three legal requirements associated with maintaining animal health records. Describe at least one specific health record that requires analysis. Include details of what analysis can be done and what the analysis will show.

Rubric:

- |          |  |
|----------|--|
| 4 Points | The response includes a thorough understanding of the legal requirements of maintaining health records. The response includes at least three legal requirements. The response includes the identification and thorough description of a specific health record requiring analysis.   |
| 3 Points | The response includes a basic understanding of the legal requirements of maintaining health records. The response includes at least three legal requirements. The response includes the identification and description of a specific health record requiring analysis. The response may have incorrect legal requirements. The response may lack specific details to describe the health record. |
| 2 Points | The response includes at least two legal requirements. The response includes the identification and description of a specific health record requiring analysis. The response may have incorrect legal requirements. The response has few specific details.   |
| 1 Point  | The response includes no correct legal requirements. The response does not include the identification or description of a specific health record requiring analysis. The response has incorrect, incomplete, and missing information. The response includes a poor understanding of the legal requirements of maintaining health records.  |



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 28.0 Maintain and analyze records.

**Benchmark:** 28.03 Maintain and analyze basic business records (inventory, depreciation, receipts, and expenses) using computer applications.

**Depth of Knowledge:** Moderate Complexity, High Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items need to be limited to basic business records (inventory, depreciation, receipts, and expenses) using computer applications.

### **Stimulus Attributes:**

Stimulus may include the basic business records and/or using computer applications.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect basic business records (inventory, depreciation, receipts, and expenses) using computer applications addressed in stimulus.

### **Sample Item:**

### Item Specifications

Stimulus: Maria is reviewing last year’s financial records for her business. Maria sells sheep and last year sold \$152,000. She is trying to determine the best way to increase her profit margins and make the business more financially viable. Analyze the information provided in Maria’s spreadsheet and determine how she can improve her profits. The response should detail at least four aspects within her control that would allow for greater profits for the business.

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Cost of Goods Sold				
<b>Fixed Costs</b>				
Equipment Repairs		3153		
Insurance		3000		
Utilities		11356		
Total Fixed Costs			17509	
<b>Variable Costs</b>				
Feed		104350		
Veterinarian Care		5300		
Labor		24000		
Total Variable Costs			133650	
Total Cost of Goods Sold				151159

Rubric:

- 4 Points      The response includes the identification of at least four aspects of business that would allow Maria to raise profits. The response includes the identification of at least four elements that are controllable by Maria. The response includes a thorough and correct interpretation of the basic business records.
  
- 3 Points      The response includes the identification of at least four aspects of business that would allow Maria to raise profits. The response includes the identification of at least four elements that are controllable by Maria. The response includes a correct interpretation of the basic business records.
  
- 2 Points      The response includes the identification of at least two aspects of business that would allow Maria to raise profits. The response includes the identification of at least two elements that are controllable by Maria. The response does not include a correct interpretation of the basic business records.
  
- 1 Point        The response includes the identification of one or less aspects of business that would allow Maria to raise profits. The response includes the identification of one or less elements that are controllable by Maria. The response does not include a correct interpretation of the basic business records.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 28.0 Maintain and analyze records.

**Benchmark:** 28.04 Prepare and maintain supervised agricultural experience (SAE) records.

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items are limited to the information commonly found in SAE records.

### Stimulus Attributes:

Stimulus may address (SAE) records.

Stimulus may include graphs, charts, diagrams or pictures.

### Response Attributes:

Responses may reflect SAE records addressed in the stimulus.

### Sample Item:

Stimulus: Create a template of an SAE record book. List at least five categories necessary for the SAE record book and provide one example for each category listed.

### Rubric:

4 Points	The response includes a thorough understanding of SAE records. The response includes a thorough and accurate template of an SAE record book. The response includes at least five correct categories necessary for an SAE record book. The response includes one or more examples for each of the five categories listed.
3 Points	The response includes a basic understanding of SAE records. The response includes a template of an SAE record book. The response includes at least four correct categories necessary for an SAE record book. The response includes 1 or more examples for at least three of the categories listed. The response may have omissions or incorrect categories.
2 Points	The response includes a partial understanding of SAE records. The response includes a template of an SAE record book. The response includes at least two categories necessary for an SAE record book. The response may not include one or more examples for each of the categories listed. The response may have inaccuracies or omissions. The response is somewhat unclear.
1 Point	The response includes a poor understanding of SAE records. The response includes a template of an SAE record book. The response includes one or fewer categories necessary for an SAE record book. The response does not include any examples for categories listed. The response has multiple errors and omissions. The response is generally unclear.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

**Standard:** 29.0 Use information technology tools.

**Benchmark:** 29.01 Use personal information management (PIM) applications to increase workplace efficiency. (IT 1.0)

**Depth of Knowledge:** Low Complexity

**Item Types:** Multiple Choice, Performance Task

**Content Limits:** Items are limited to the use of PIM in the workplace.

### Stimulus Attributes:

Stimulus may address PIM to increase workplace efficiency.

Stimulus may examine personal information management (PIM) applications to increase or decrease workplace efficiency.

Stimulus may include graphs, charts, diagrams or pictures.

### Response Attributes:

Responses may reflect personal information management (PIM) applications to increase workplace efficiency addressed in the stimulus.

### Sample Item:

What is personal information management (PIM)?

- \* A. The study of the activities people perform in order to acquire, organize, maintain, retrieve and use information items such as documents, web pages and email messages for everyday use.
- B. Collecting, sharing, and disseminating personal information to employers, peers, governmental agencies, etc. in a safe and secure manner.
- C. The process of collecting and organizing information in such a manner that material can be recalled or used for specific purposes without having to recreate the material on each occasion that it is required.
- D. Synergistic overlap with disciplines such as cognitive science, human-computer interaction, information science, artificial intelligence, database management and information retrieval.

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 29.0 Use information technology tools.

**Benchmark:** 29.02 Employ technological tools to expedite workflow including word processing, databases, reports, spreadsheets, multimedia presentations, electronic calendar, contacts, email, and internet applications. (IT 2.0)

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should address technological tools that expedite workflow including word processing, databases, reports, spreadsheets, multimedia presentations, electronic calendar, contacts, email, and internet applications.

### **Stimulus Attributes:**

Stimulus may address technological tools that expedite or hinder workflow including word processing, databases, reports, spreadsheets, multimedia presentations, electronic calendar, contacts, email, and internet applications.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect workflow including word processing, databases, reports, spreadsheets, multimedia presentations, electronic calendar, contacts, email, and internet applications to increase workplace efficiency addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Jackson owns a feed supply company. His company is growing, but he sees the need to integrate technology to help promote his company. Which technological application would aid Jackson in marketing his company and products? Identify and describe at least three technologies/technological applications that would help Jackson in marketing his company.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response includes a thorough understanding of technological tools to expedite work flow. The response includes the identification and description of at least three correct technologies/technological applications that would help Jackson.                                      |
| 3 Points | The response includes a basic understanding of technological tools. The response includes the identification and description of at least two correct technologies/technological applications that would help Jackson. The response may have some incorrect or omitted applications.   |
| 2 Points | The response includes partial understanding of technological tools. The response includes the identification and description of at least one correct technology/technological application that would help Jackson. The response may have several omissions or incorrect technologies. |
| 1 Point  | The response includes poor understanding of technological tools. The response may not include the identification or description of any technologies/technological applications. The response is generally unclear.  |

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 29.0 Use information technology tools.

**Benchmark:** 29.03 Employ computer operation applications to access, create, manage, integrate, and store information. (IT 3.0)

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items are limited to basic computer operations needed in the livestock industry.

### **Stimulus Attributes:**

Stimulus may address the computer applications to access, create, manage, integrate, and store information.

Stimulus may include graphs, charts, diagrams or pictures.

### **Response Attributes:**

Responses may reflect computer applications to access, create, manage, integrate, and store information to increase workplace efficiency addressed in the stimulus.

### **Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

### **Item Specifications**

Stimulus: Bert owns a feed supply company. His company is growing and he needs to integrate computer software to help manage his business. Describe how Bert could computerize his inventory system. The response should be one page in length and include listing at least four benefits that Bert would derive from the use of such a system.

Rubric:

- |          |  |
|----------|--|
| 4 Points | The response includes a thorough understanding of computer applications to increase workplace efficiency. The response includes the identification and thorough description of at least one technological application that could be used in this scenario. The response includes listing at least four benefits from employing such an application.  |
| 3 Points | The response includes a basic understanding of computer applications to increase workplace efficiency. The response includes the identification and description of at least one technological application that could be used in this scenario. The response includes listing at least three correct benefits that would be seen from employing such an application.  |
| 2 Points | The response include a partial understanding of computer applications to increase workplace efficiency. The response includes the identification and description of at least one technological application that could be used in this scenario. The response includes listing at least two benefits that would be seen from employing such an application. The response may have incorrect technology or omit its use in the inventory system. |
| 1 Point  | The response includes a poor understanding of computer applications as they relate to an inventory system. The response includes the identification of one technological application. The response may not include listing at least one benefit that would be seen from employing such an application. The response may not list correct benefits of the use of technology.  |



**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## **Item Specifications**

**Standard:** 29.0 Use information technology tools.

**Benchmark:** 29.04 Employ collaborative/groupware applications to facilitate group work. (IT 4.0)

**Depth of Knowledge:** Moderate Complexity

**Item Types:** Constructed Response, Performance Task

**Content Limits:** Items should address knowledge of collaborative/groupware applications to facilitate group work.

**Stimulus Attributes:**

Stimulus may address collaborative/groupware applications to facilitate or hinder group work.  
Stimulus may include graphs, charts, diagrams or pictures.

**Response Attributes:**

Responses may reflect collaborative/groupware applications to facilitate group work addressed in the stimulus.

**Sample Item:**

**Course Name:** Animal Science and Services 3

**Course Number:** 8106220

## Item Specifications

Stimulus: In two paragraphs, identify a collaborative/groupware application that facilitates group work. Describe how the application can be utilized in the animal science industry. Include the benefits of employing such a tool.

Rubric:

- |          |   |
|----------|---|
| 4 Points | The response indicates a thorough understanding of groupware applications to facilitate group work. The response includes the identification of a collaborative/groupware application that is viable in the animal science industry. The response includes a thorough and comprehensive description of how the selected application facilitates group work. The response includes a list of benefits associated with employing the application tool within the industry.  |
| 3 Points | The response indicates a basic understanding of groupware applications to facilitate group work. The response includes the identification of a collaborative/groupware application that is viable in the animal science industry. The response includes a description of how the particular selected application facilitates group work. The response includes a list of benefits associated with employing the application tool within the industry. The response has some details. The response may list incorrect benefits or incorrect applications to the animal science industry. |
| 2 Points | The response indicates a partial understanding of groupware applications. The response includes the identification of a collaborative/groupware application that is viable in the animal science industry. The response may not include a description of how the selected application facilitates group work. The response may not include a list of benefits associated with employing the application. The response has omissions and may have incorrect information.   |
| 1 Point  | The response indicates a poor understanding of groupware applications. The response includes the identification of a collaborative/groupware application. The response does not include a description of how the selected application facilitates group work. The response does not include a list of benefits associated with employing the application. The response has multiple omissions.  |