



## Tennessee Specific Industry Certification Animal Science Content Area Resource

This Tennessee Specific Industry Certification (TSIC) resource provides additional guidance as you prepare your veterinary and animal science instructional materials. The general knowledge and skills are provided as a guide for developing lessons and lab activities that lead to deeper understanding of content. The list of sample terms are just that, a list of sample terms that will be helpful to build each student's knowledge base for this content area.

### ***General knowledge and skills for Digestion and Nutrition***

- Identify major anatomical components of ruminants and monogastrics digestive systems and the general function of each component.
- Explain the enzymes and process associated with each part of the different digestive systems.
- Describe the difference between ruminant and non-ruminant digestive systems.
- Explain the chemical and mechanical process as feedstuff goes through a digestive system.
- Identify the six major classes of nutrients and their role in animal nutrition.
- Calculate proper diets for companion and food animals at different life stages.
- Interpret the information found on a feed label.

### **Sample terms associated with content area**

- Abomasum
- Absorption
- Acid digestion
- Alfalfa hay
- Alfalfa meal
- Amino acids
- Anaerobic fermentation
- Anemia
- Blackleg
- Brewers' grains
- Canola meal
- Carbohydrates
- Cecum
- Cobalt
- Concentrate
- Copper
- Corn
- Cottonseed meal
- Crop
- Decreased
- Digested microbial protein
- Digestion
- Disease resistance
- Dry forage
- Roughage
- Duodenum
- Enzymes
- Fats
- Fattening
- Feeder pigs
- Feedstuffs
- Fescue hay
- Finishing
- First trimester of gestation
- Gestation
- Gizzard
- Grit
- Ground
- Ground corn meal
- Growth



## Tennessee Specific Industry Certification Resource Topics and Terms

- Hay
- Haylages
- Hormones
- Hydrochloric acid
- Iodine
- Lactation
- Lysine
- Malnutrition
- Manganese
- Microbial action
- Minerals
- Monogastric
- Monogastric herbivore
- Non-ruminant
- Oats
- Omasum
- Pastures
- Pearson square
- Proventriculus
- Ration
- Rebreed
- Regurgitation
- Reticulum
- Rice bran
- Rumen
- Ruminant
- Second trimester of gestation
- Silages
- Soybean meal
- Stocker calf
- Stomach
- Third trimester of gestation
- Thyroid hormone
- Vitamin A
- Vitamin B
- Vitamin E
- Vitamins
- Volatile Fatty Acids (VFA's)
- Water
- Water soluble
- Wheat from pasture
- Zinc