

# Kansas Animal Science Skills & Competencies Certificate – Support Document

## Examples of Pathway Skills

This list is not exhaustive

Below are **examples** of the **application-level skills** applicants describe when completing the Skills & Competencies Gained portion of the certificate application.

### Animal Science Pathway

- Outline the development of the animal industry and the resulting products, services and careers
- Explain the impact of animal body systems on performance, health, growth and reproduction
- Evaluate and select animals to maximize performance based on anatomical and physiological characteristics that affect health, growth and reproduction
- Diagnose illnesses and disorders of animals based on symptoms and problems caused by diseases, parasites and physiological disorders
- Formulate animal feeds based on nutritional requirements, using feed ingredients for maximum nutrition and optimal economic production
- Compare and contrast quantitative breeding value differences between genetically superior animals and animals of average genetic value
- Design programs that assure the welfare of animals and prevent abuse or mistreatment
- Explain why animal trace-back capability, using individual animal and farm identification systems, is important to producers and consumers
- List guidelines for safety when handling dangerous chemicals and when working with small animals
- Examine the housing and equipment requirements in order to properly own and care for miniature livestock
- Explain the principle of immunization in horses
- Detail accurate records for equine operation
- Understand equine behaviors
- Outline the process used in artificial insemination
- Diagram how muscles are attached to the skeleton
- Explain mechanical and chemical digestive process of ruminant and monogastrics; including horses and chickens
- Illustrate the structure of the mammary system
- Demonstrate proper methods of animal restraint, determining animal temperature, giving injections and/or obtaining fecal samples

A complete list of Animal Science Pathway Knowledge and Skills can be found at [ksde.org/default.aspx?tabid=449](https://ksde.org/default.aspx?tabid=449) under the title “2016-2017 Animal Science Pathway Design Sheet with Competencies”.

Please refer to these lists when completing the Skills & Competencies Gained portion of the certificate application.