Equine

*Lesson Plan for Grade 3, Science*

*Prepared by NAITC*

*Modified by Mississippi State University, School of Human Science*

*for Mississippi Farm Bureau Federation - AITC*

# OVERVIEW & PURPOSE

Students will read about and research the domestication of animals to better understand why and how they are raised on a farm.

# EDUCATIONAL STANDARDS

**Mississippi College-and-Career Readiness Standards:**

L.3.1.1 Examine evidence to communicate information that the internal and external structures of animals (e.g., heart, stomach, bone, lung, brain, skin, ears, appendages) function to support survival, growth, and behavior.

Math-3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).

**NALOs:**

T2.3-5 e Understand the concept of stewardship and identify ways farmers/ranchers care for soil, water, plants, and animals.

# OBJECTIVES

* Students will examine external anatomy of a horse

# MATERIALS NEEDED

* [Anatomy of a Horse Quiz](https://4-h.org/wp-content/uploads/2016/02/AnatomyofaHorseQuiz.pdf) (Can be modified by teacher)
* Spirit: Stallion of the Cimarron (Movie)
* Webquest Link: <http://thinklikeahorse.org/index-5.html>

Essential Links:

* Webquest Link: <http://thinklikeahorse.org/index-5.html>
* [Anatomy of a Horse Quiz](https://animalscience.tamu.edu/wp-content/uploads/sites/14/2012/04/equine-youth-horse-quiz-bowl1.pdf)

# Lesson Set Up:

1. Print the Anatomy of a Horse Quiz (1 per student). This can be modified by the teacher.
2. Have the movie Spirit: Stallion of the Cimarron available for the students to watch.
3. Allow students time and resources to conduct a webquest to finish their worksheets.

# VOCABULARY

**draft horse:** a large horse used for pulling heavy loads, especially a cart or plow

**horsepower:** a unit used to measure the power of engines

**quarter horse:** a small, strong horse that can run very fast for short distances

# Ag Facts:

**Horsepower** is a measurement of work. It was created by James Watt who lived from 1736 until 1819. Watt wanted to measure the amount of energy required to raise coal out of a coal mine, so he created “horsepower” as the unit of measure. How much is one horsepower? One horsepower is equivalent to 33,000 foot-pounds of work performed in 1 minute, which can be achieved in many different combinations of feet and pounds.1

One horsepower equals all of the following:

* Lifting 33,000 pounds up 1 foot in 1 minute
* Lifting 1 pound up 33,000 feet in 1 minute
* Lifting 1000 pounds up 33 feet in 1 minute
* Lifting 1000 pounds up 330 feet in 10 minutes
* Lifting 100 pounds up 33 feet in 6 seconds

# Background information for teachers:

All **domesticated animals** have their origins in wild ancestors, but it takes hundreds of years for an animal species to be completely domesticated. Humans had already been domesticating animals for thousands of years before anyone began recording history. The first domesticated animals were probably raised as pets, for sports, or for religious purposes. Archaeologists believe people did not begin to domesticate animals until they had settled into communities and established reliable food supplies through farming or fishing.

The dog was the first animal to be domesticated, probably 10,000 to 12,000 years ago. Sheep and goats came next, around 7,000 BC, in the Middle East and Central Asia. Cattle were domesticated in South Asia, the Middle East and Europe by 4,000 BC. Pigs were domesticated at about the same time. Present-day cattle derive from the wild **aurochs** (or-oks), a huge beast which sometimes stood five feet at the withers, had horns three feet long and weighed a ton.

The easiest animals to domesticate were **herd** animals. Herd animals follow the lead of a dominant member. They stay close together and move together. Early farmers could use surplus grains to attract hungry animals, especially in times of drought. They watched the animals and learned their food and water needs. They would lead them to suitable pasture and water and protect them from **predators**. The animals grew accustomed to having humans around and gradually became tame.

Although farmers would kill some of the tame animals for food, they would save the youngest and the tamest. The farmer would kill the animals that were most difficult to manage and save those that were more tame. The animals that ate the most would be killed as well. The smaller, tamer animals would reproduce, and eventually the entire herd would become smaller and more tame. This was the beginning of the practice we know now as **selective breeding**.

At first the tame animals were used only as an easy source of meat. Later the farmer noticed that crops grew better on plots where animals had grazed and realized the value of animal **manure** as **fertilizer**. Through more observation, the farmer realized the animals’ milk could provide another food source.

Eventually humans discovered they could weave the hair of animals like sheep and goats to make cloth for clothing. The Sumerians were the first to develop sheep and goats with the woolly coats we use for making cloth today.

Sometime before 3300 BC, farmers in Sumer and nearby Egypt started using animals as beasts of burden. Wooden plows were invented and drawn by oxen or asses to turn over the irrigated fields. Farmers also found they could harness animals to haul carts loaded with the harvest, making it possible to move large amounts of grain to a storage point or canal boat for further transport. In the New World, the alpaca, llama, duck, turkey and dog were all domesticated by the time of the first European explorers. Early European settlers brought their domesticated animals with them when they came to the New World. These included cattle, sheep, goats, pigs and chickens. Horses were introduced to the New World by the Spanish in the 15th Century. Many of them escaped to form the wild mustang herds in the West.

In the past 100 years, farmers and ranchers have begun to domesticate some other species of **wild animals**. On the Great Plains of North America, the bison, a herd animal, had roamed the grasslands for thousands of years. Prehistoric humans living on the plains hunted the bison but did not make any serious efforts to domesticate them. In the late 1900s, when hunters threatened the bison with extinction, some ranchers and other conservationists began rounding up small herds. Over the past 100 years these small herds have grown into large ones, and in some parts of the Great Plains, cattle ranchers have begun replacing their cattle with bison herds. Since the bison are native to the Great Plains they are better adapted than cattle to the conditions present there.

# LEARNING PROCEDURES

Interest Approach:

1. Ask your students if they have ever ridden a horse.
2. Inform students that they will be observing horses and their anatomy.
3. Pass out the horse anatomy quiz to every student.
4. Explain to students that they will need to try to fill it out as they watch the movie about Spirit.
5. Play the movie Spirit: Stallion of the Cimarron for the students.
6. After the movie, have students conduct a webquest using the <http://thinklikeahorse.org/index-5.html> website to finish their worksheets.

**Concept Elaboration and Evaluation**

* Review the worksheet and what students learned about horses from the movie.

# Additional Learning Procedures

To help students review and elaborate more about dairy, try using the [“Carousel”](https://drive.google.com/file/d/1SB9hDE9JWUxi3qUCOzUzIpDZGB_VjPQ1/view?usp=drive_link) method to allow students to think deeper and make new connections.

Additional texts to include:

[From Foal to Horse](https://www.agfoundation.org/recommended-pubs/from-foal-to-horse)

[Horses on the Farm](https://www.agfoundation.org/recommended-pubs/horses-on-the-farm)

[Horses](https://www.agfoundation.org/recommended-pubs/horses2)



Source: <https://www.agclassroom.org/teacher/matrix/>

*For more information and additional lessons visit*

*https://msfb.org/ag-in-the-classroom/lesson-plans/.*