How is your Christmas season so far? I pray that our last lesson gave you much to think about. This week we will continue to study animals that are represented in a traditional manger scene.

The donkey is grouped in the order Perissodactyla, an odd-toed ungulate. This order includes browsers and grazers—plant eaters—such as the horse, the tapir, and the rhinoceros, in addition to the donkey. We are only aware of seven species of horse, donkey, and zebra in modern animal science.

Kingdom: **Animalia**

Phylum: **Chordata**

Class: **Mammalia**

Order: **Perissodactyla**

Family: **Equidae**

Genus: **Equus**

Subgenus: **Asinus**

Species: **E. africanus**

Subspecies: **E. a. asinus**
Ungulate is a term used to describe any animal with a hoof. We divide them further into even-toed and odd-toed ungulates. This is a helpful categorization when dealing with exotic animals. When a veterinarian is presented with a wild animal with which he may be unfamiliar, he can treat the animal according to the classification of even- or odd-toed ungulate. An odd-toed ungulate such as a zebra will have much the same anatomy and physiology as a horse, donkey, or mule.

A donkey is often smaller than a horse, with a narrower frame. Donkeys have been used as pack animals since Old Testament times. They are small, hardy, and sure-footed. They have a simple stomach but a large specialized colon. For this reason, they are known as hind-gut fermenters. The grass and hay fibers are broken down in the colon and large intestines.

We use a “hand” measuring system to tell the height of horses and donkeys. One “hand” is 4 inches. This does correspond to the width of a man’s hand. A donkey that measures 11 hands high will be 44 inches at the withers.
The other animal we mainly associate with the manger scene is the camel. We usually picture the wise men arriving on camels to bring gifts to Jesus. The camel is an even-toed ungulate. In this case, that makes a very big difference in the digestive system of the animal. Camels are in the same order (Artiodactyla) as cattle, pigs, deer, bison, and goats.

Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Artiodactyla
Family: Camelidae
Tribe: Camelini
Genus: Camelus

Camels are unique in this order because they have two toes, but no real hooves. Each toe has a hard nail that gives the impression of a hoof. The two large halves are joined together underneath by a web of skin which prevents the animals from sinking into the sand. Camels are ruminants with a very similar digestive system to the cow, which we have already studied.

Now for that famous hump. The hump of a camel does not store water directly. The hump (or humps) of a camel actually store fat. This enables the camel to utilize stored resources during
periods of drought or famine. When a camel does stop to drink water, it can store up to 20 gallons at one time throughout its body. Baby camels do not begin to grow a hump until they start ingesting a good amount of forage on their own, around the age of two months. If the camel is starving, then the hump will use up its reserves. At that point, the hump will begin to droop. It will correct itself once proper nutrition is reinstated.

Your assignment for this week:

1. Review the digestive system of the cow. Why are cattle better suited to America, while camels are better suited for a desert environment?
2. Continue your animal observations in your notebook. If you are in an area of snow, put out a bird feeder and see what is still living in your nearby woods. Bird feeders provide a source of squirrel and chipmunk watching, in addition to the birds.

Going Beyond:

- Visit a place with a camel and donkey. Note the differences between the two animals as they graze. What is different about their mouths? Their tails?

Prayers for a Merry Christmas and many blessings into the New Year!

Parents’ Note:

- This continues to provide an opportunity for your Bible study about the nativity.
- This is a good time to review the Biblical account of Balaam in Numbers 22. The talking donkey could only do so with God’s intervention, partially due to the fact that the donkey’s mouth isn’t anatomically capable of speaking.
- Please make sure your students go back over the ruminant digestive system.