

# Got Guts? Teacher Review

## Teeth (Pig and Cow)

This part is the most distinctive and long-lasting features of mammal species. To an animal, these are the tools that help them *tear and chew food*.

Cattle have flat teeth and enjoy eating grasses and grains. Pigs have a variety of teeth. They are omnivores and enjoy eating plants and animals.

*Students place the description, “tear and chew food,” near the teeth of both pig and cow models.*

## Esophagus (Pig and Cow)

This is the route food takes to get to the stomach, or rumen. *Muscle contractions force food through this tube and into the stomach.*

*Students place the description, “muscle contractions force food through this tube and into the stomach,” near the esophagus of both pig and cow models.*

## Stomach (Pig)

Species with a monogastric digestive system have this organ. This is where *muscles mix the food with acids and enzymes, breaking it into smaller, digestible pieces.*

*Students place the description, “muscles mix the food with acids and enzymes, breaking it into smaller, digestible pieces,” near the stomach of the pig model.*

## Rumen (Cow)

Cattle have one stomach with four chambers. This is the first chamber where *good bacteria help the cow digest her food and provide her with protein and energy.*

*Students place the description, “good bacteria help the cow digest her food and provide her with protein and energy,” near the rumen of the cow model.*

## Reticulum (Cow)

This chamber of the stomach sorts particles entering or leaving the rumen. This organ *brings the undigested feed back up the esophagus in the form of cud, to be rechewed.*

*Students place the description, “brings the undigested feed back up the esophagus in the form of cud, to be rechewed,” near the reticulum of the cow model.*

## Omasum (Cow)

This is a small chamber. It's *folds regulate flow of partially digested food to the fourth chamber.*

*Students place the description, “folds regulate flow of partially digested food to the fourth chamber,” near the omasum of the cow model.*

## Abomasum (Cow)

This chamber is most like the stomach of a monogastric animal. It *prepares the nutrients that are present for absorption in the small intestine,* it contains strong acids and digestive enzymes.

*Students place the description, “prepares the nutrients that are present for absorption in the small intestine,” near the abomasum of the cow model.*

## Small Intestine (Pig and Cow)

In both species, food travels through *a tube-like structure that absorbs nutrients into the bloodstream.*

The small intestine of a steer is 20 times the animal's length. The small intestine of pig is approximately 15-20 meters.

*Students place the description, “a tube-like structure that absorbs nutrients into the bloodstream,” near the small intestine of both pig and cow models.*

## Large Intestine (Pig and Cow)

Despite its name, this structure is actually shorter than the small intestine. It *removes water and minerals from the undigested matter and forms solid waste that can be excreted.* This is the final structure food moves through before the animal defecates.

*Students place the description, “removes water and minerals from the undigested matter and forms solid waste that can be excreted,” near the large intestine of both pig and cow models.*