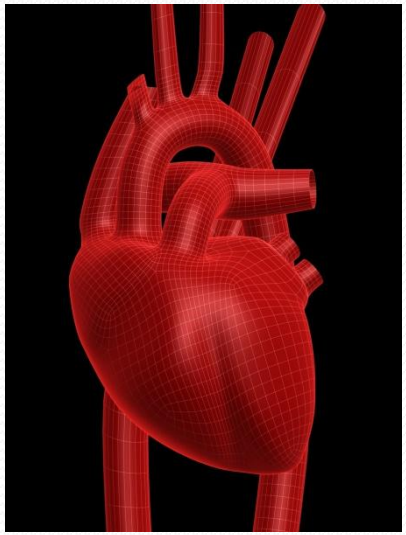
Monogastrics VS Ruminents

By Melissa and Lindsey

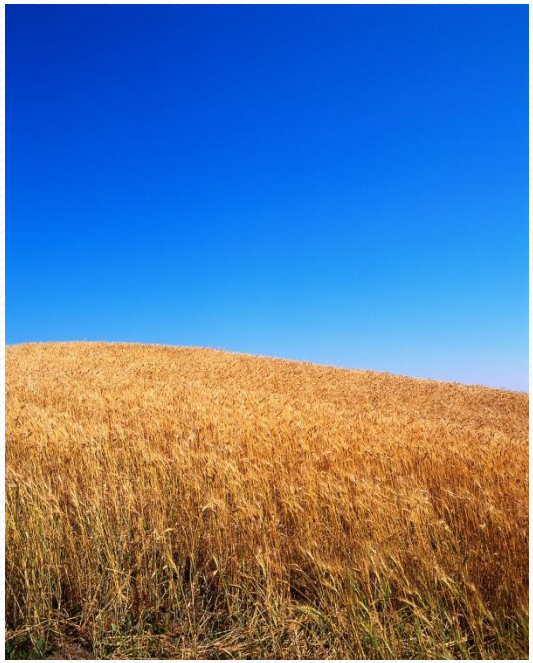
What is Digestion

- Digestion - the breaking down of foodstuffs in the body into a form that can be absorbed and used or excreted

Ruminant Vs Monogastric Differences



- Anatomy
- Fermentation
- Diet



Digestive System - Pig

Accessory organs of the mouth

Mouth

Teeth

Esophagus

cardiac valve

Digestive System – Pig Cont.

Stomach

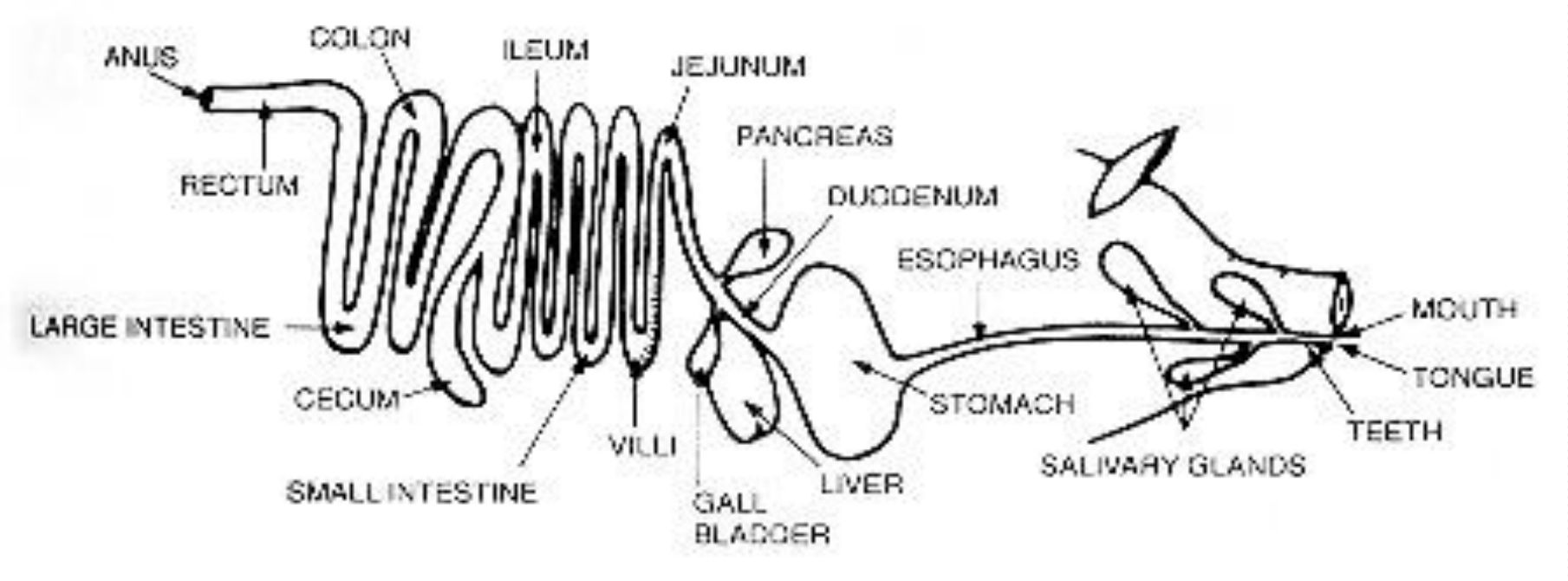
Small intestine

Large intestine

Rectum

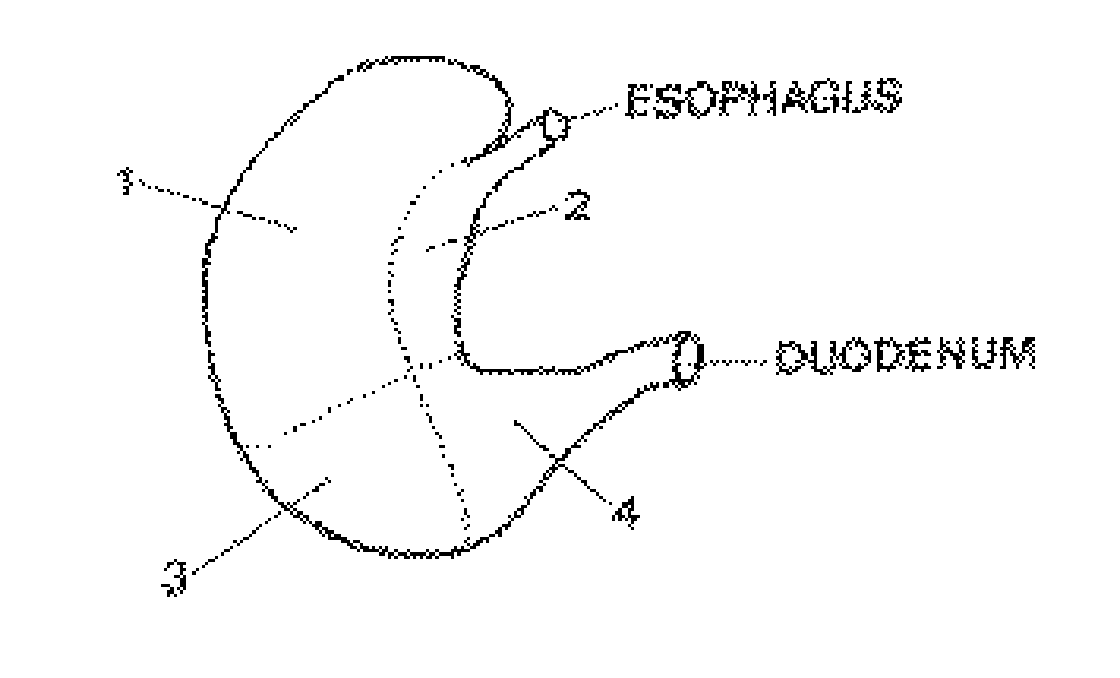
Pigs Stomach

Pig’s Digestive Track



Regions of a Pigs Stomach

- 1 – Cardic Gland
- 2 - Esophageal Gland
- 3 - Fundic Gland
- 4 - Pyloric Gland



Humans Digestive Track

http://kidshealth.org/PageManager.jsp?lic=1&article_set=59299&cat_id=20607

Monogastric Stomach – Human

- **How it works**

- chyme – partly digested food in the stomach mixed with stomach acidsregulates the amount of food going into the intestines

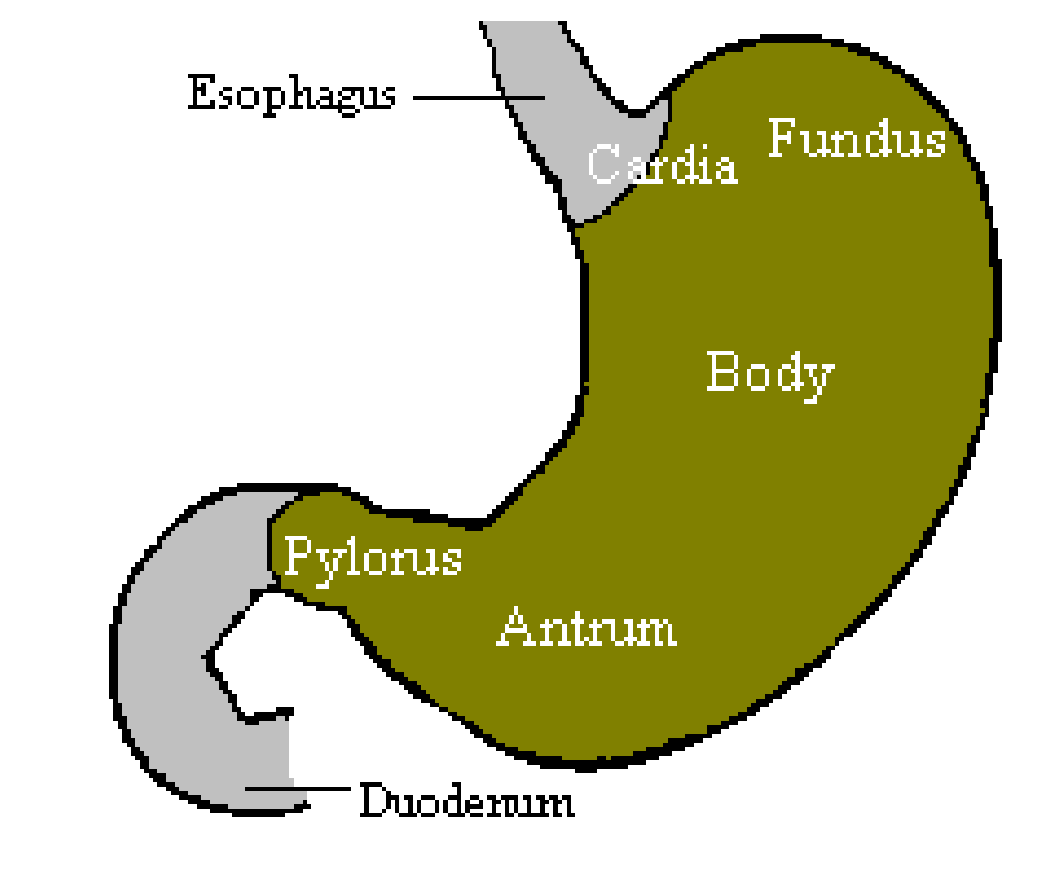
- cardic sphincter – closes and opens at the entrance of the stomach

- pyloric sphincter – closes and opens at the exit of the stomach

Functions of the Stomach - Human

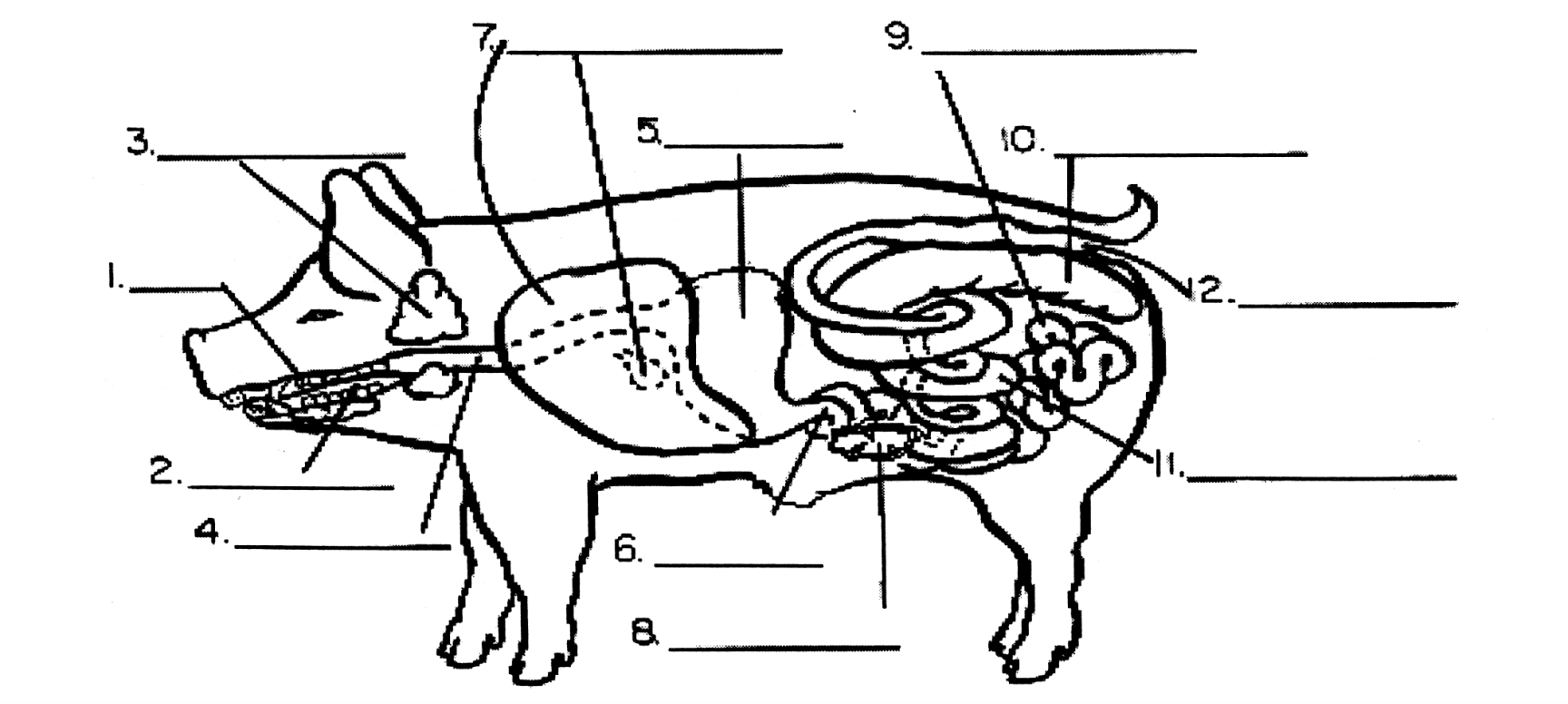
- Stores Food
- Breaks Down Food
- Kills Germs
- Produces Body Fluid

Regions of a Human Stomach

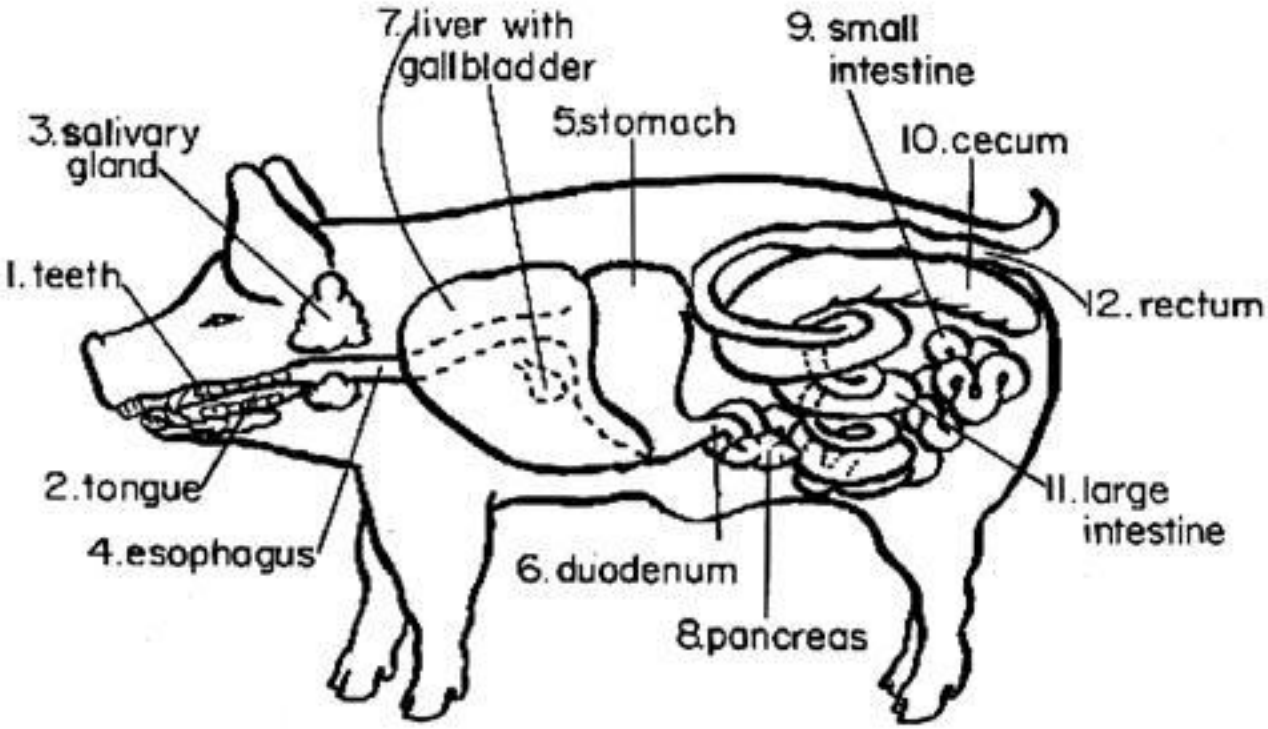


- Esophageal
  - Non-glandular
- Cardiac
  - Secretes mucus
- Fundic
  - Parietal cells
  - Chief cells
- Pyloric
  - Mucus

Can You Identify - # 4, 5, 11, 12



Were you right??



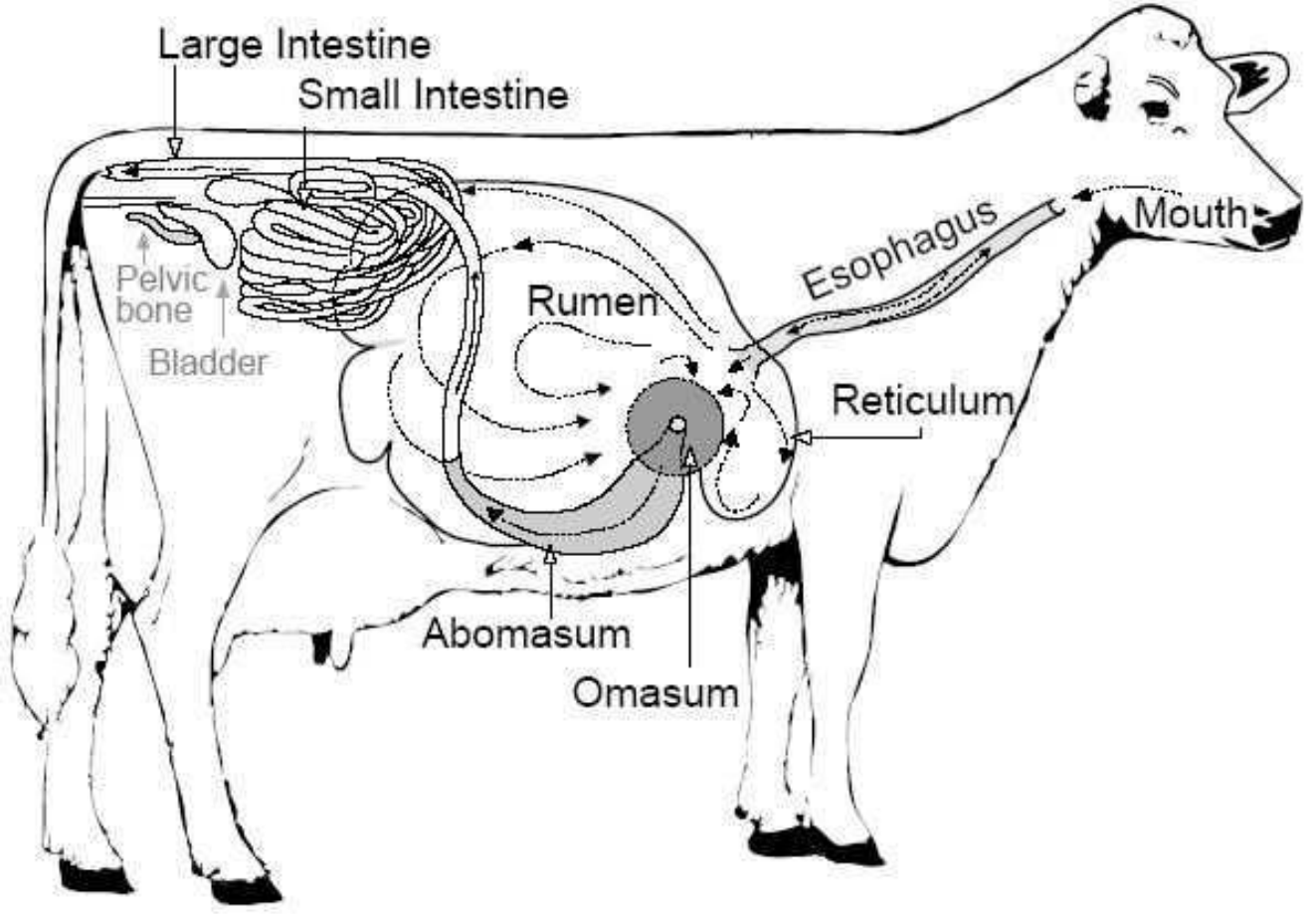
Digestive System - Cow

- **Accessory Organs**
- Mouth
- Teeth
- Upper Dental Pad
- Esophagus
- Cardia

Accessory Organs Continued

- Esophageal Grove
- Stomach
- Small intestine
- Cecum
- Large intestine

Digestive System – Cow

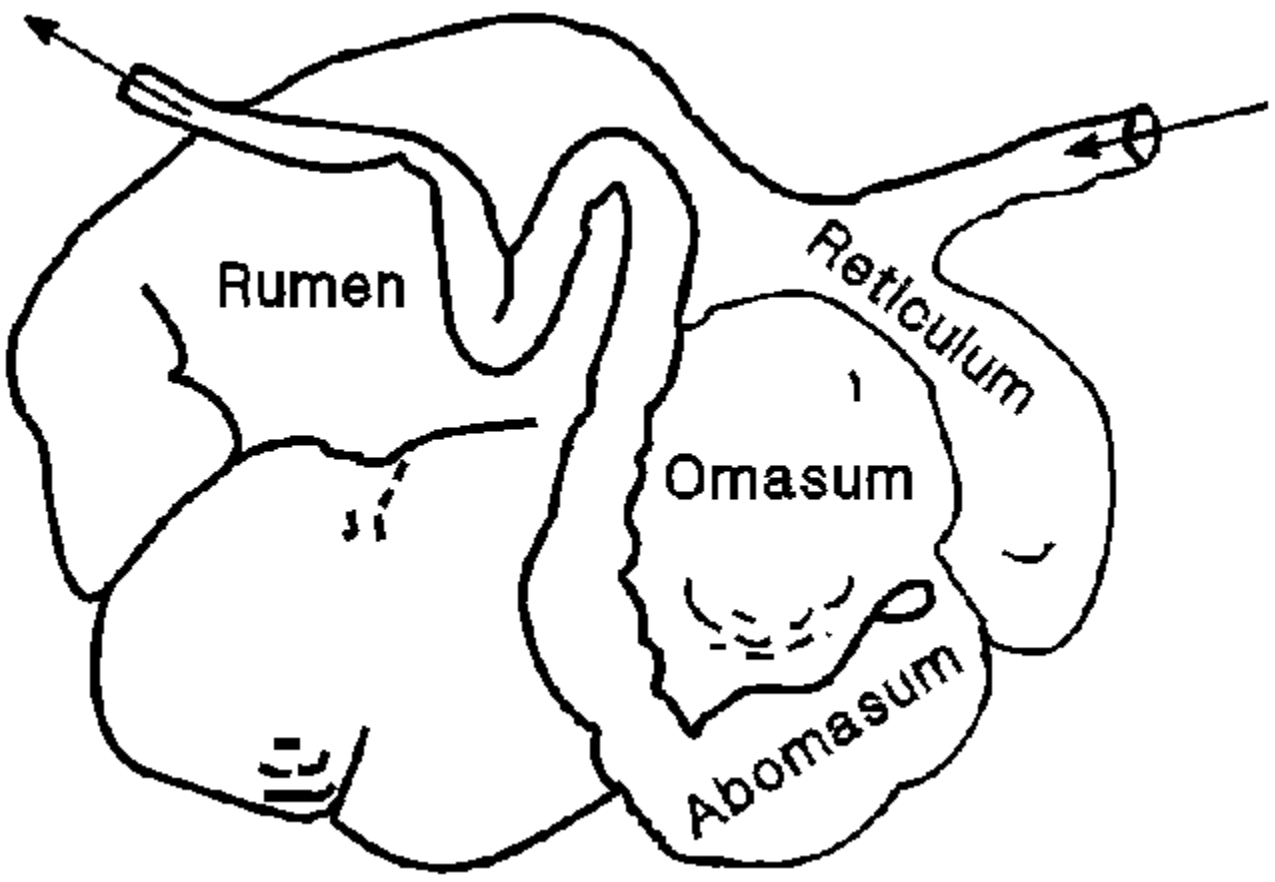


Stomach

- **1 Stomach 4 Comartments**

- 1. Reticulum
- 2.Rumen
- 3. Omasum
- 4. Abomasum

Cow’s Stomach



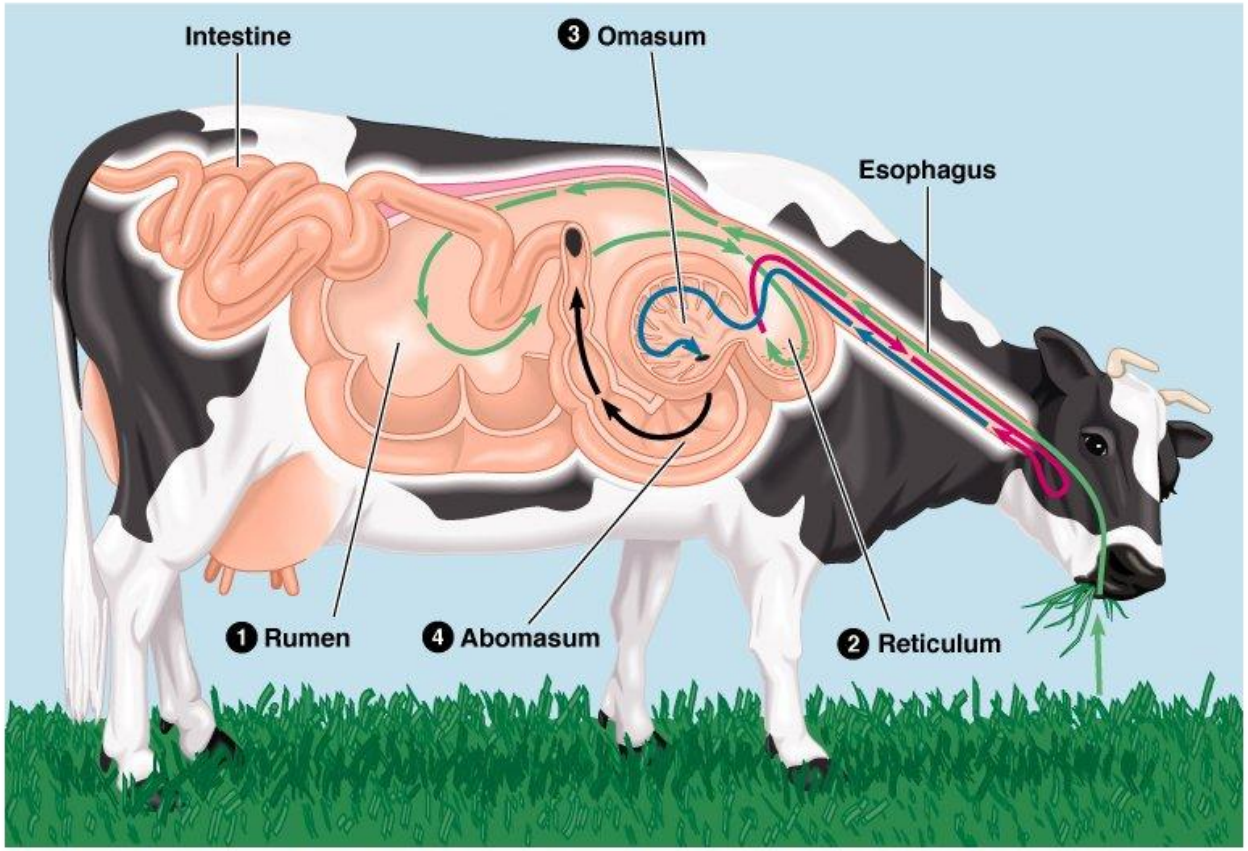
Reticulum

Rumen

Omasum

Abomasum

Can You identify the Cow?



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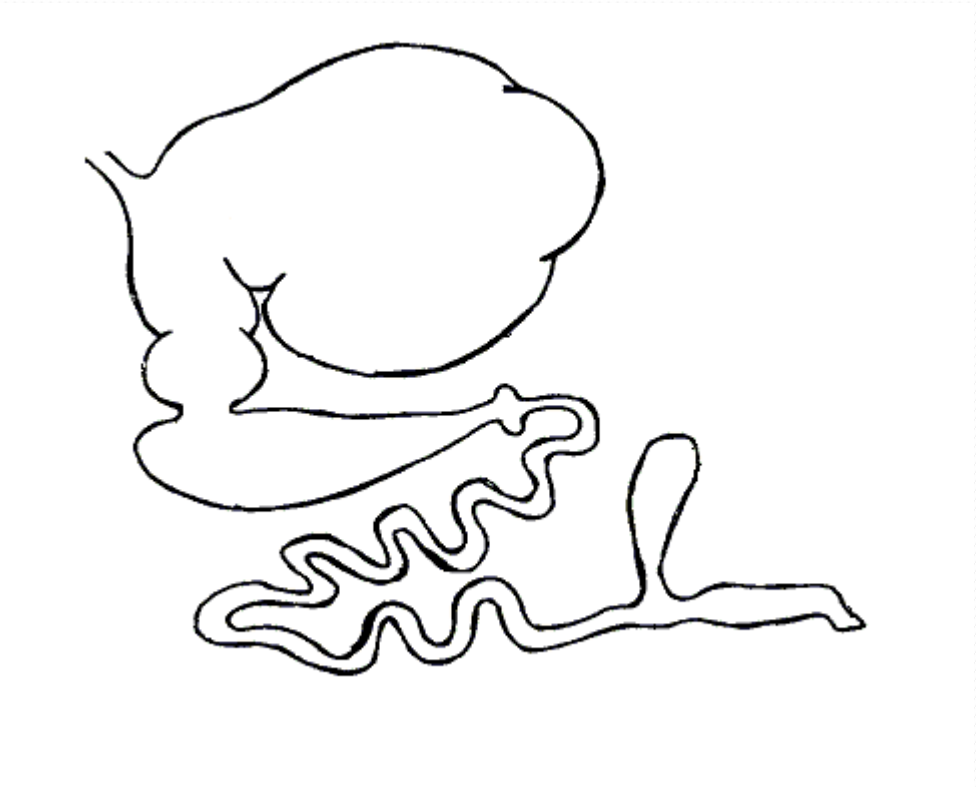
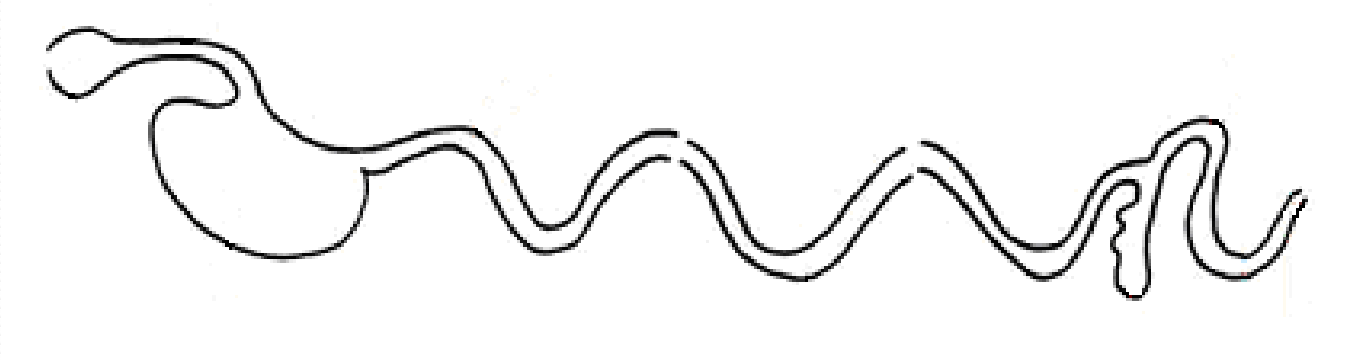
Ruminant or Monogastric ?



Ruminant or Monogastric?



Stomach Capacity Activity

- Cow 53.5 gal
- 3.5 gal horse
- 2 gal pig
- ¼ gal. human

Refrences

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