

BY2.5 Adaptations for Digestion

Different Types of Nutrition

Stages of digestion

Structure of the gut

Overall structure of digestive system

Glands & enzymes in digestion

Structure of the ileum & absorption

The colon & faeces

Teeth

Ruminant Digestion

Types of Nutrition



Heterotroph

Autotroph



Saprobionts – a type of heterotroph



- Extracellular digestion
- Secretion of enzymes
- Absorption by diffusion

Heterotrophic Nutrition in animals



Undifferentiated

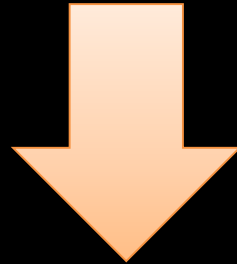
Simple gut

No different regions

? Why have a
differentiated
gut? ?

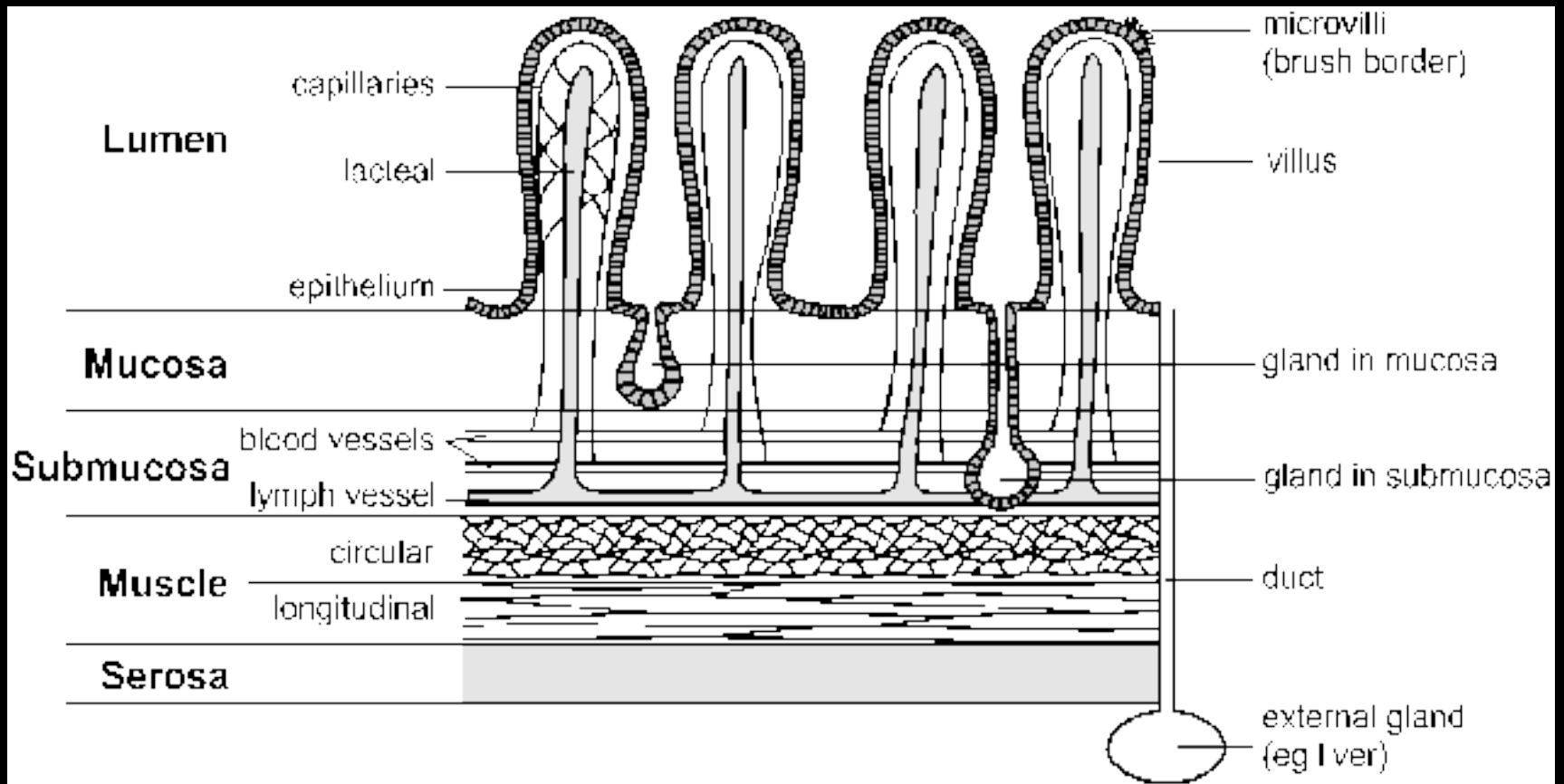
Stages in Digestion

Egestion Digestion Ingestion Absorption

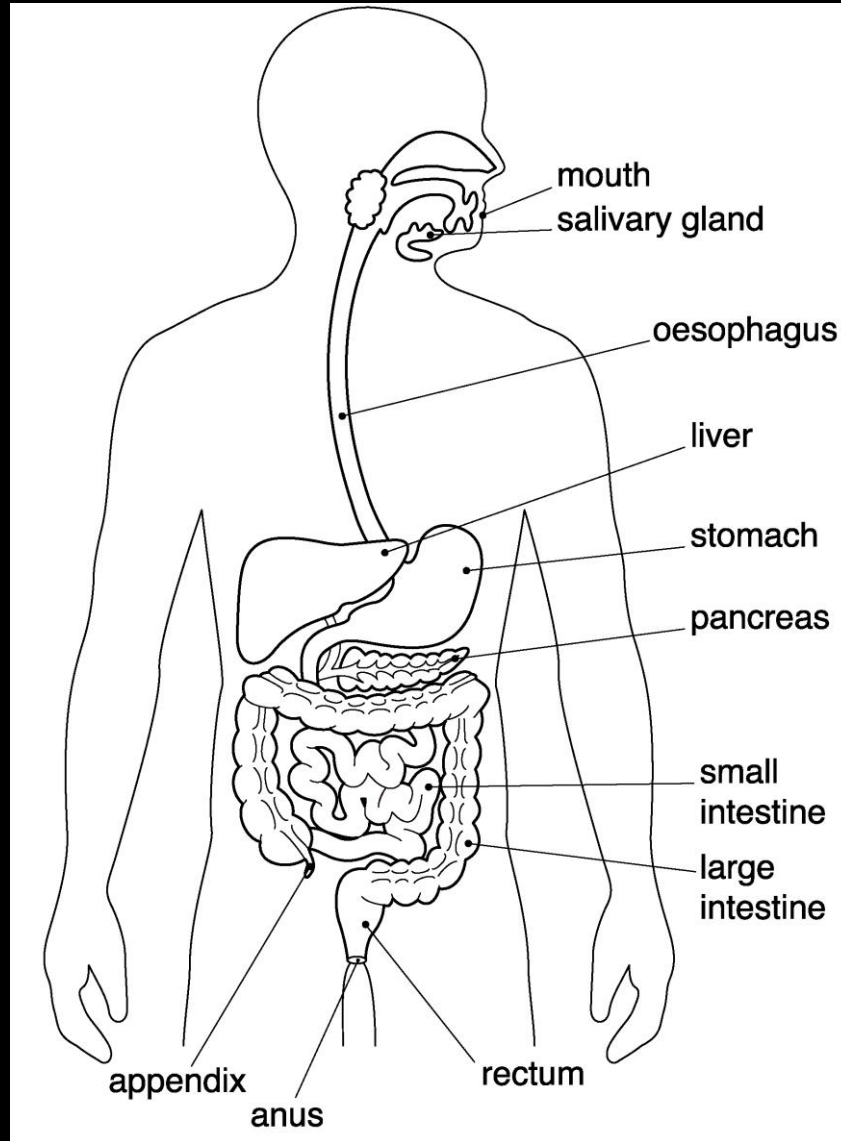


Ingestion Digestion Absorption Egestion

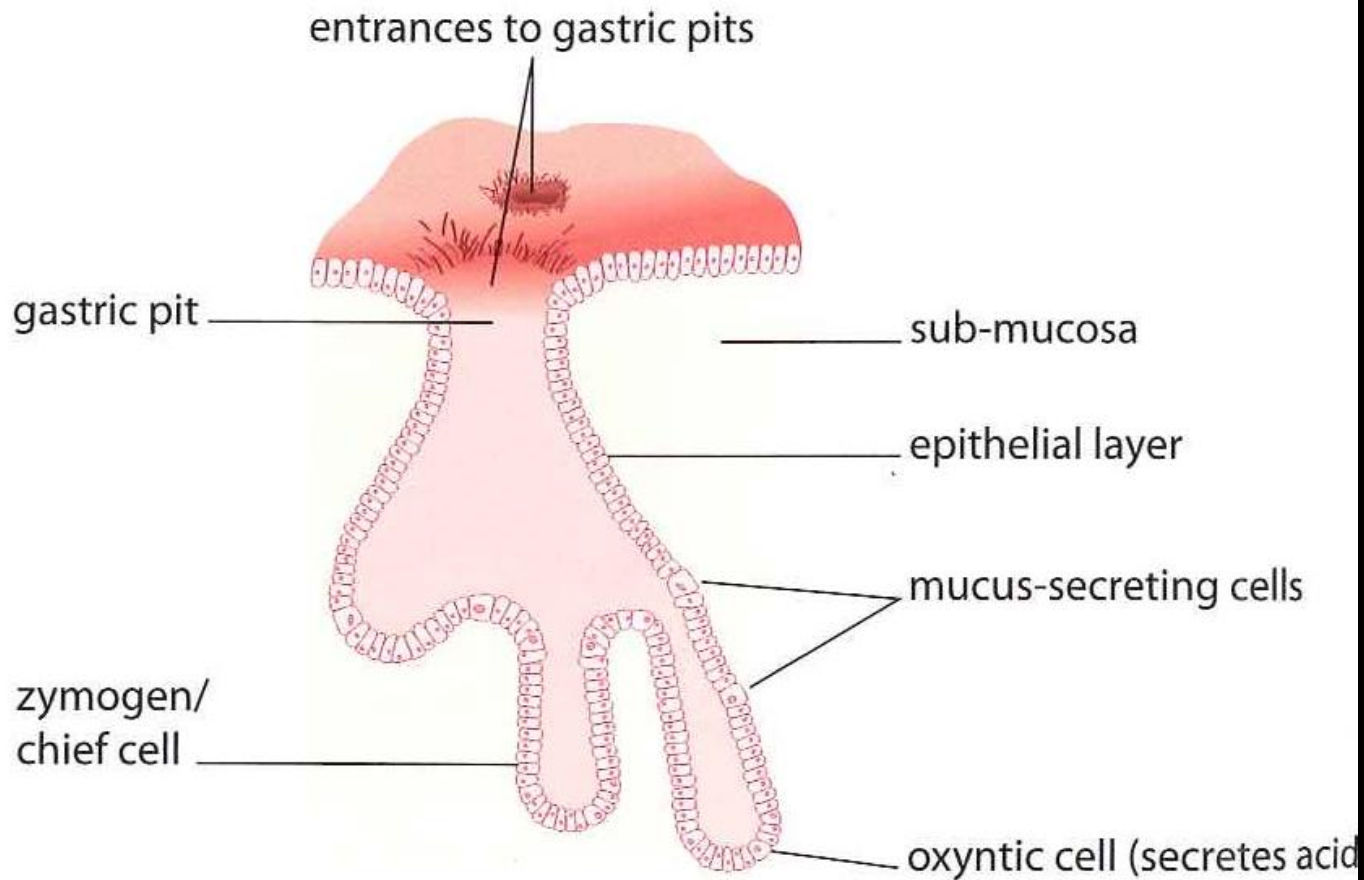
Structure of the gut wall



Human Alimentary Canal



Glands in Digestion

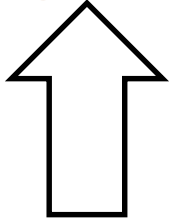


Enzymes in digestion

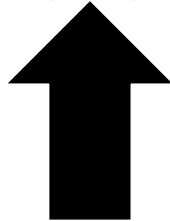
- Carbohydrate digestion
- Starch -> Maltose -> Glucose
- Which enzyme at each stage?

Enzymes in digestion

- Protein digestion
- Endopeptidase and exopeptidase



Exopeptidase



Endopeptidase

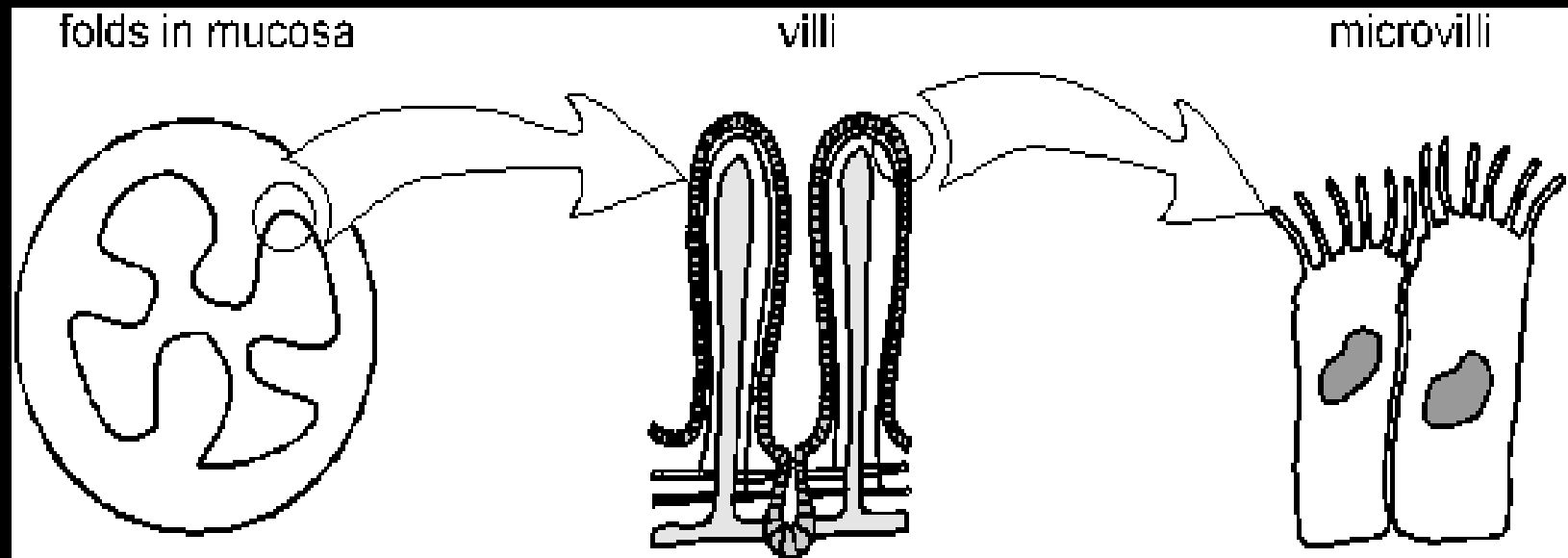
Enzymes in digestion

- Lipid digestion
- Simple – lipase enzyme

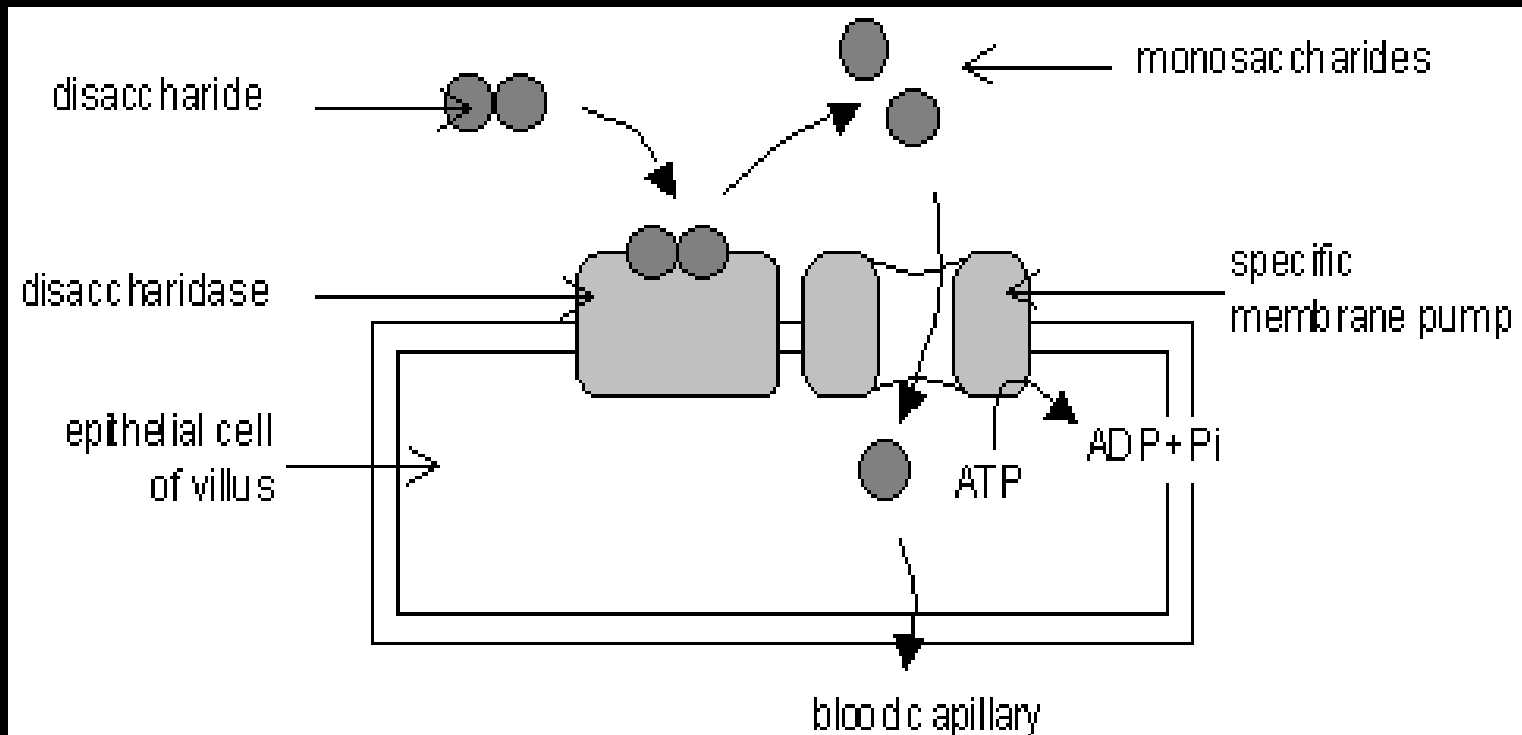
Mucus Secretion



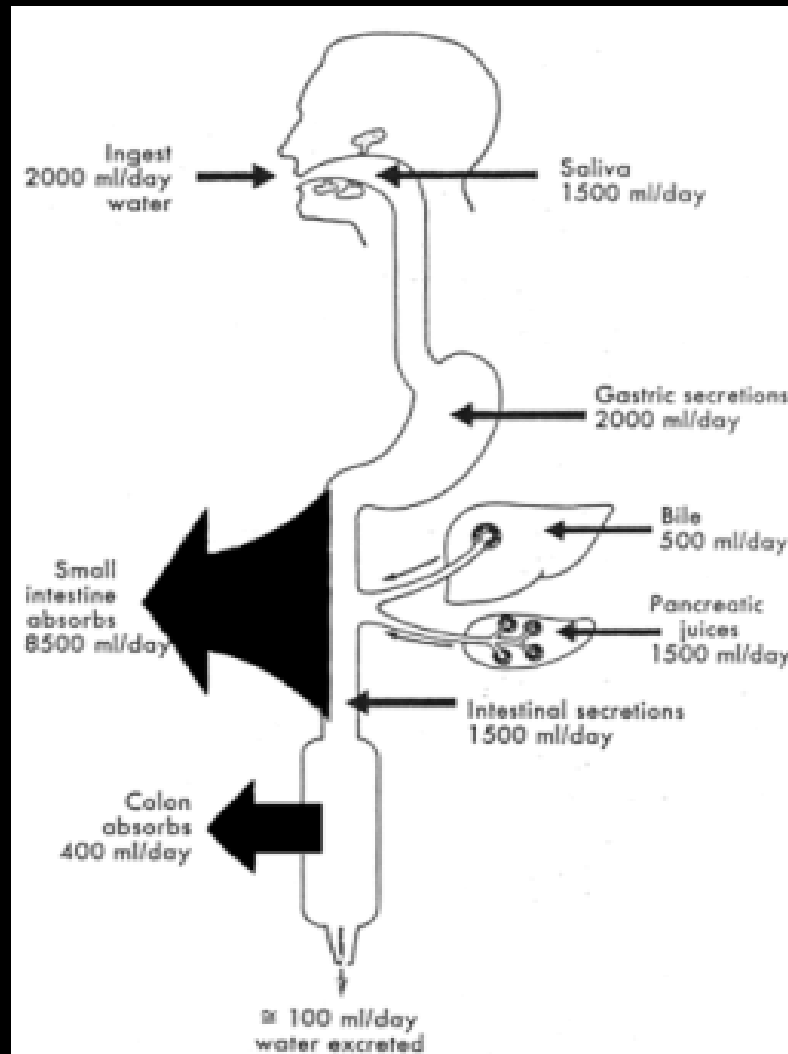
The Ileum



Absorption




The Colon

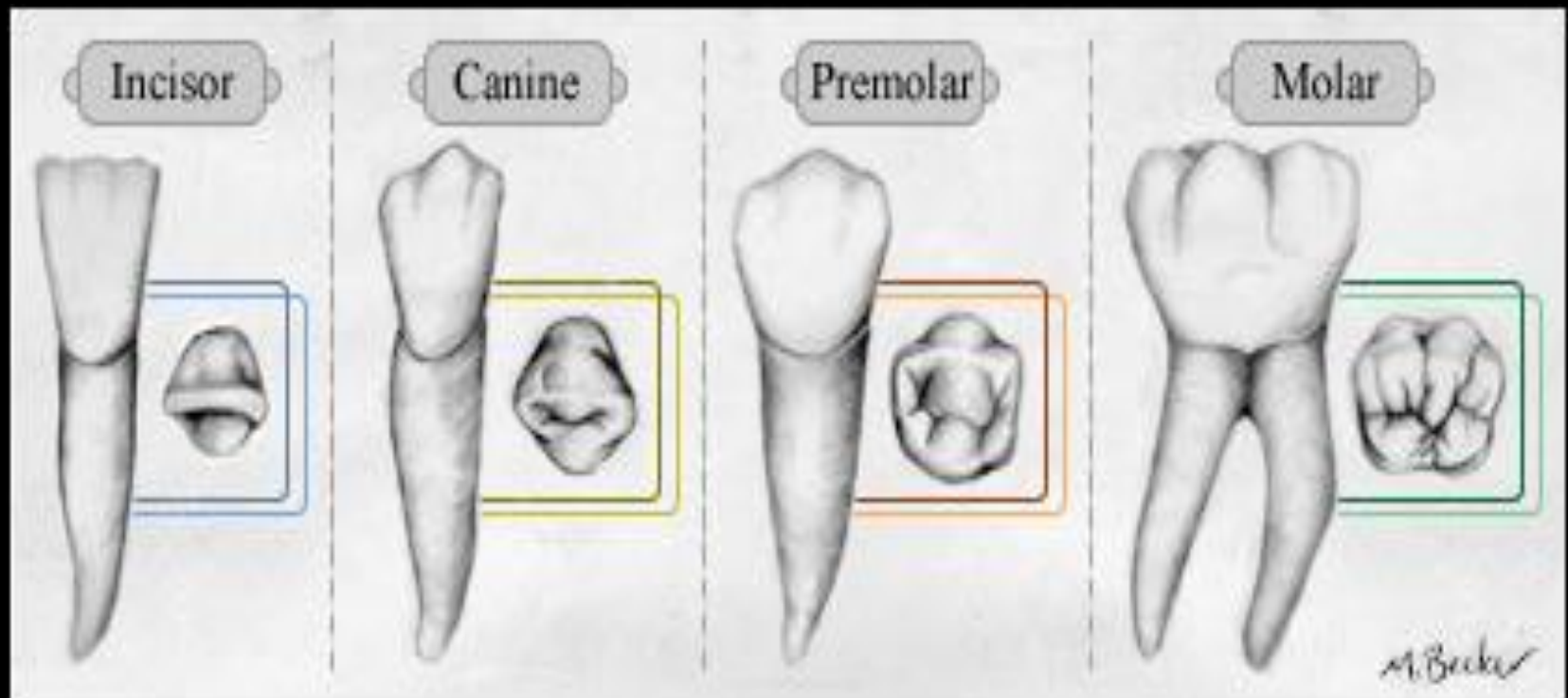


Faeces

Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

Teeth



- **TASK: Research the differences between the teeth of carnivores and herbivores.**

C grade - Include diagrams/pictures of the teeth and jaw

B grade - Describe the structure of the teeth and the movement of the jaw

A grade - Explain how the structure is adapted to the function

Ruminant Digestion

