Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_

Animal Digestion Notes

***Objective A: Describe the major parts and functions of the digestive system***

***The Process:***

* **The mouth** is the starting point that begins the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ process.
* **The tongue** is used for: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the food,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* **The teeth** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the feed into smaller particles

 that may be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**2 Types of Digestion:**

* Physical:
* Chemical:

**In the mouth**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ excrete saliva, which serves many purposes.

*-Water to moisten*

*-Mucin to lubricate*

*-Bicarbonates to buffer acids*

*-Enzyme amylase to break down carbs*.

**The esophagus**

is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tube that leads from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the opening of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***What type of muscles make up the esophagus?***

**The Stomach**

is a hollow muscle that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestive juices with the food causing it to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Small Intestine**

is next and is controlled by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ muscle that helps move food \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and through the tract.

* The small intestine is made up of three segments:
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Duodenum:**

* First segment
* Uses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the pancreas and intestinal wall to break down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Jejunum & Ileum**

* Where \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ takes place.
* *Absorption* passes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**The walls of the Jejunum & Ileum**

**Villi**

* *Small \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*
* *Increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**for absorption*
* *Absorb nutrients through membranes known as**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*
* *These membranes allow particles to pass through in a process called* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.***

**The Large Intestine**

Is the last organ of the digestive tract. It contains two segments:

* **Cecum** is where \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food such as hay and grass is broken down into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nutrients.
* **Colon** provides a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for waste from the digestive process, and is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ part of the large intestine.

**Rectum**

is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ end of the large intestine and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ digestive system.

***Objective B: Define monogastric and list characteristics of monogastric animals***

**Monogastric =**

Characteristics of Monogastrics:

 1-

2-

***Objective C: Describe the Ruminant Digestive System***

**Ruminant Systems:**

1-

2-

3-

4-

**1-Rumen**

-Serves as a storage vat where food is soaked, mixed, and fermented by bacteria.

-Contains fingerlike projections called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that absorb nutrients through the rumen wall to provide energy.

**2-Reticulum**

-2nd Compartment

-Contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to promote fermentation.

-Food is ingested, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, chewed, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ again.

 \*\*Eructed means:

 -Nicknames for reticulum=

 -What is “Hardware Disease?”

**Reticular Groove:**

 Why?

**3-Omasum**

-A round organ with wall that contain many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or “plies”

- Lined with blunt muscular papillae that grind roughage*.*

**4-Abomasum**

-This compartment is the only true glandular stomach of the ruminant.

-Secretes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to digest microbes.

**Characteristics of Ruminants:**

1-

2-

3-

***D. Describe the Avian Digestive System***

**Avian Digestion:**

1. Mouth:
2. Esophagus: (Same Function as other animals)
3. Crop:
	1. Factoid:
4. Proventriculus
5. Gizzard
6. Small Intestine: (Same Function as other animals)
7. Ceca: (Same Function as other animals)
8. Large Intestine: (Same Function as other animals)
9. Cloaca

***E. Classify Animals according to their type of digestion***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Monogastric** | **Ruminant** | **Modified Monogastric** | **Avian** |
| **Type of Food****Consumed** |  |  |  | Characteristics: |
| **# of Stomach Compartments** |  |  |  |

**Classify animals:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **What do they eat?** | **How many stomach compartments** | **Type of Digestive System** |
| **Cattle** |  |  |  |
| **Horses** |  |  |  |
| **Sheep** |  |  |  |
| **Chickens** |  |  |  |
| **Rabbits** |  |  |  |
| **Goats** |  |  |  |
| **Pigs** |  |  |  |
| **Turkeys** |  |  |  |

***F. List digestive enzymes and their function***

**Enzyme:**

**In the Mouth**

 **Saliva**: Begins the breakdown of carbs

**In the stomach**

 **Gastric Juice**:

-0.2-0.5% hydrochloric acid

 -Produced by stomach/abomasum

 **Pepsin:**

-Breaks down proteins

**In the small intestine**

 **-Chyme:** An acid

 **-Pancreatic Juices**

-**Trypsin**: Breaks down protein

 **-Pancreatic Amylase:** changes starch to a simple sugar

 **-Bile:** Green liquid produced in the liver and stored in gall bladder. Digests fat.