**CH. 24 DIGESTIVE SYSTEM PROJECT**

***Directions***

* Pick Partner
* Read assigned section (assigned by Mr. Fitz)
* Take notes over section
  + Include pics
  + Include vocab
  + Include **structures**
  + Include **functions**
* Answer questions (be as complete and concise as possible)
* Create presentation (power point, prezi, podcast, etc.)
* Present presentation
  + If you will not be present to present please make a podcast for your presentation.
* Answer the other sections checkpoint questions

**24-1 Digestive System Functions, Organs, Histology, and Regulation**

1. What is the digestive tract?
2. List and describe in general the functions of the organ of the digestive system.
3. List and describe the functions of the digestive system.
4. How does the digestive tract play a protective role? (3 things)
5. Describe the structure of mesenteries.
6. Describe the physiology of mesenteries.
7. List and describe the 4 major layers of the digestive tract (structure(s) and function(s)).
8. Differentiate peristalsis and segmentation.
9. List and briefly describe the 3 types of control over digestive functions.

**24-2 Oral Cavity and Tongue: (pg. 870-871)**

1. List and describe the functions of the oral cavity.
2. Describe some of the general structures of the oral cavity.
3. Which type of epithelium lines the oral cavity?
4. List the functions of the tongue.
5. Describe the structure of the tongue.
6. What enzyme is present on the tongue? What does it begin to break down?
   1. Figure 24-6a
   2. Oral cavity
   3. Oral mucosa
   4. Cheeks
   5. Labia
   6. Vestibule
   7. Gingivae
   8. Uvula
   9. Tongue
   10. Body
   11. Root
   12. Lingual frenulum
   13. Lingual lipase

**24-2 Salivary Glands: (pg. 871-873)**

1. What is the function of salivary glands?
2. Differentiate between the 3 pairs of salivary glands. Where is it located, what duct(s) are associated with it, what does it secrete and break down?
3. The digestion of which nutrient would be affected by damage to the parotid salivary glands?
4. What is saliva composed of?
5. List and describe the functions of saliva.
6. What and how are salivary secretions controlled?
   1. Figure 24-7a
   2. Parotid salivary glands
   3. Sublingual salivary glands
   4. Submandibular salivary glands
   5. Saliva
   6. Mucins
   7. Salivary amylase

**24-2 Teeth: (pg. 873-875)**

1. What are the functions of the teeth?
2. Describe the structures associated with teeth.
3. What can cause tooth decay?
4. Differentiate the 4 types of teeth.
5. Which type of tooth is most useful for chopping off bits of rigid foods?
6. Describe dental succession.
7. Describe mastication.
   1. 24-8a and b
   2. Teeth
   3. Mastication
   4. Dentin
   5. Pulp cavity
   6. Root canal
   7. Root
   8. Periodontal ligament
   9. Cementum
   10. Neck
   11. Crown
   12. Enamel
   13. Incisors
   14. Cuspids
   15. Bicuspids
   16. Molars
   17. Deciduous teeth
   18. Primary dentition
   19. Secondary dentition
   20. Eruption

**24-3 Pharynx and 24-4 Exophagus: (pg. 876-878)**

* Describe the structure of the pharynx.
* Describe the function of the pharynx.
* Identify the muscle associated with the pharynx.
* Name the structure connecting the pharynx to the stomach.
* Describe the function of the esophagus.
* Describe the structure of the esophagus.
* Describe the distinctive histological features of the esophagus.
* Compared to other segments of the digestive tract, what is unusual about the muscularis externa of the esophagus?
* What is occurring when the soft palate and larynx elevate and the glottis closes?
* Describe the process of swallowing.
* Figure 24-10 a or b
* Figure 24-11
* Pharynx
* Esophagus
* Deglutition
* Swallowing reflexes

**24-5 Stomach: (pg. 878-881)**

* List the 4 major functions of the stomach.
* What is chyme?
* Name and describe the 4 major regions of the stomach.
* Describe the changes in size the stomach can experience.
* Describe the histology of the stomach.
  + Figure 24-12b
  + Stomach
  + Chyme
  + Lesser curvature
  + Greater curvature
  + Cardia
  + Fundus
  + Body
  + Pylorus
  + Pyloric sphincter
  + Rugae
  + Oblique layer
  + Gastric pits

**24-5 Stomach Glands 🡪 Digestion and absorption: (pg. 881-882)**

* What 2 types of cells do gastric glands contain? What do these cells secrete? What do their secretions do?
* What do pyloric glands secrete? What do their secretions do?
* Discuss the significance of the low pH in the stomach.
* How does a large meal affect the pH of blood leaving the stomach?
* Why aren’t nutrients absorbed in the stomach?
  + Figure 24-13a
  + Gastric glands
  + Gastric juice
  + Parietal cells
  + Chief cells
  + Pepsinogen
  + Pepsin
  + Pyloric glands
  + Gastrin

**24-6 Small intestine: (pg. 883-888)**

* What are the functions of the small intestine?
* What other accessory organs are associated with the small intestine?
* Name and differentiate the 3 regions of the small intestine from proximal to distal.
* What are plicae circulares and what is their function?
* Describe the structure and function of intestinal villi.
* Describe the structure and function of the 2 types of glands in the small intestine.
* How are the 3 regions histologically different?
* Describe the composition and function of intestinal juices.
* Describe the movement of chyme through the small intestine.
* How is the small intestine adapted for the absorption of nutrients?
  + Figure 24-16a
  + Small intestine
  + Duodenum
  + Jejunum
  + Ileum
  + Ileocecal valve
  + Plicae circulares
  + Intestinal villi
  + Intestinal glands
  + Duodenal glands
  + Intestinal juice

**24-6 Pancreas: (pg. 888-889)**

* Describe the structure of the pancreas.
* Describe the two functions of the pancreas.
* List the pancreatic enzymes and their functions.
* The digestion of which nutrient would be most impaired by damage to the exocrine pancreas?
* Does a high fat meal raise or lower the level of cholecystokinin in the blood?
  + Figure 24-18a
  + Pancreas
  + Body
  + Tail
  + Pancreatic duct
  + Pancreatic juice
  + Pancreatic alpha-amylase
  + Pancreatic lipase
  + Nucleases
  + Proteolytic enzymes

**24-6 Liver: (pg. 890-895)**

* Describe the anatomy of the liver.
* Briefly describe the histology of the liver.
* Describe the 3 general categories the functions of the liver fall into.
  + Figure 24-19b
  + Liver
  + Right lobe
  + Left lobe
  + Caudate lobe
  + Quadrate lobe
  + Porta hepatis
  + Hepatocytes
  + Liver lobules
  + Central vein
  + Kupffer cells
  + Portal areas
  + Bile
  + Common bile duct
  + Cystic duct
  + Bile salts
  + Emulsification

**24-6 Gallbladder: (pg. 895-897)**

* Describe the functions of the gallbladder.
* Describe the structure of the gallbladder.
* Describe the physiology of the gallbladder. What forms if bile becomes too concentrated?
* Describe how the activities of the digestive glands are controlled hormonal mechanisms.
* How would the pH of the intestinal contents be affected if the small intestine did not produce secretin?
  + Figure 24-21a
  + Gallbladder
  + Fundus
  + Body
  + Neck
  + Gastrin
  + Secretin
  + GIP
  + CCK
  + VIP
  + Enterocrinin

**24-7 Large Intestine 🡪 Rectum: (pg. 898-900)**

* Describe the functions of the large intestine.
* Identify and describe the four regions of the colon.
  + Figure 24-24a
  + Large intestine
  + Cecum
  + Appendix
  + Colon
  + Haustra
  + Taeniae coli
  + Ascending colon
  + Transverse colon
  + Descending colon
  + Sigmoid colon
  + Rectum
  + Anal canal
  + Anus
  + Internal anal sphincter
  + External anal sphincter

**24-7 Large Intestine Histology 🡪 End: (pg. 900-903)**

* What are some major histological differences between the large intestine and the small intestine?
* Describe absorption in the large intestine.
* How are wastes produced and moved through the large intestine.
* Differentiate between haustral churning and mass movements.
  + Figure 24-25a
  + Vitamins
  + Organic wastes
  + Flatus
  + Mass movements
  + Haustral churning
  + Defecation reflex

**24-8 Digestion and Absorption: (pg. 903-908)**

* What kind of nutrients does the body require?
* In general describe the two step process of breaking down and absorption of carbohydrates.
* In general describe the digestion and absorption of lipids.
* What components of food would increase the number of chylomicrons in the lacteals?
* In general describe the digestion and absorption of proteins.
* Describe the absorption of water.
* Describe the absorption of ions and vitamins.
* The absorption of which vitamin would be impaired by the removal of the stomach? Why is it that diarrhea is potentially life threatening, but constipation (infrequent defecation) is not?
* Figure 24-27