

UNIT 10 - DIGESTIVE SYSTEM

ACTIVITY - Digestive Worksheet

Name _____ Period _____

1. Describe the differences between chemical and mechanical digestion.

2. Differentiate between the alimentary canal and accessory organs. Give examples of each.

3. List the three pairs of salivary glands.
 - a.
 - b.
 - c.

4. Describe the functions of saliva.

5. Arrange the following tooth regions in order from the most superficial to the deepest:
_____ root
_____ crown
_____ neck

6. Arrange the following tooth structures in order from the most superficial to the deepest.
_____ pulp cavity
_____ enamel
_____ dentin

7. Arrange the following tooth structures in order from the hardest substance to the softest substance.
_____ pulp cavity
_____ enamel
_____ dentin

8. What is another name for the gums? _____

9. Describe the action of salivary amylase.

10. What term means...

- a. chewing: _____
- b. swallowing: _____
- c. gastric mixing movements: _____
- d. ball of food formed in the mouth: _____
- e. liquid paste formed by food and gastric juice: _____
- f. wave-like smooth muscle contractions that move food: _____
- g. folds in the stomach that allow it to stretch: _____

11. Answer the following questions about the stomach.

- a. The stomach connects to the esophagus at the _____.
- b. The stomach connects to the duodenum at the _____.

12. Answer the following questions about the pancreas.

- a. The digestive enzymes are produced by the _____ cells.
- b. Pancreatic juices flow through the pancreatic duct and into the _____.

13. Answer the following questions about the gallbladder:

- a. The gallbladder is located on the underside of the _____.
- b. The gallbladder _____ and _____ bile.
- c. The bile flows through the _____ and into the small intestine where it _____ fat.
- d. The principle pigment of bile is _____.

14. Name the three sections (in order) of the small intestine.

- a.
- b.
- c.

15. What are the modified structures of the small intestine which increase the surface area for absorption? _____

16. What are the two major functions of the small intestine?

- a.
- b.

17. Name the structures (in order) of the large intestine.

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.

18. List three major functions of the large intestine.

- a.
- b.
- c.

WORKSHEET – Digestive Review – KEY

1. Chemical digestion occurs when the food substances (carbohydrates, proteins, and lipids) are broken down into their building blocks (glucose, amino acids, and fatty acids and glycerol).

Mechanical digestion occurs when the food substances are broken down into smaller pieces.

2. The alimentary canal is also known as the GI tract. Food directly passes through these organs as it is moved along and processed. Examples include the mouth, esophagus, stomach, small and large intestines.

The accessory organs provide additional enzymes, bile, other fluids, and surface area to aid in both the chemical and mechanical digestion of food.

3. The three pairs of salivary glands are: parotid, sublingual, and submaxillary.
4. Saliva has several functions including to mix with food to form a ball or food or bolus, to help maintain the pH of the mouth, to help clean the teeth, and to chemically digest starch.
5. From the most superficial to the deepest: crown, neck, root.
6. From the most superficial to the deepest: enamel, dentin, pulp cavity.
7. From the hardest to the softest: enamel, dentin, pulp cavity.
8. Gingiva
9. Salivary amylase breaks down starch (amylase) into maltose molecules. (Maltose is a disaccharide).
10.
 - A. mastication
 - b. deglutition
 - c. haustral churning
 - d. bolus
 - e. chyme
 - f. peristalsis
 - g. rugae
11.
 - a. cardiac region
 - b. pyloric region

12.
 - a. acini
 - b. Small intestine (duodenum)

13.
 - a. liver
 - b. stores and concentrates
 - c. common bile duct, emulsifies
 - d. bilirubin

14.
 - a. duodenum
 - b. jejunum
 - c. ileum

15. villi and microvilli

16.
 - a. complete digestion of all nutrients
 - b. absorption of nutrients

17.
 - a. cecum
 - b. ascending colon
 - c. transverse colon
 - d. descending colon
 - e. sigmoid colon
 - f. rectum
 - g. anal canal
 - h. anus

18.
 - a. absorption of water
 - b. absorption of electrolytes
 - c. formation of wastes
 - d. production of vitamin K
 - e. elimination of solid wastes