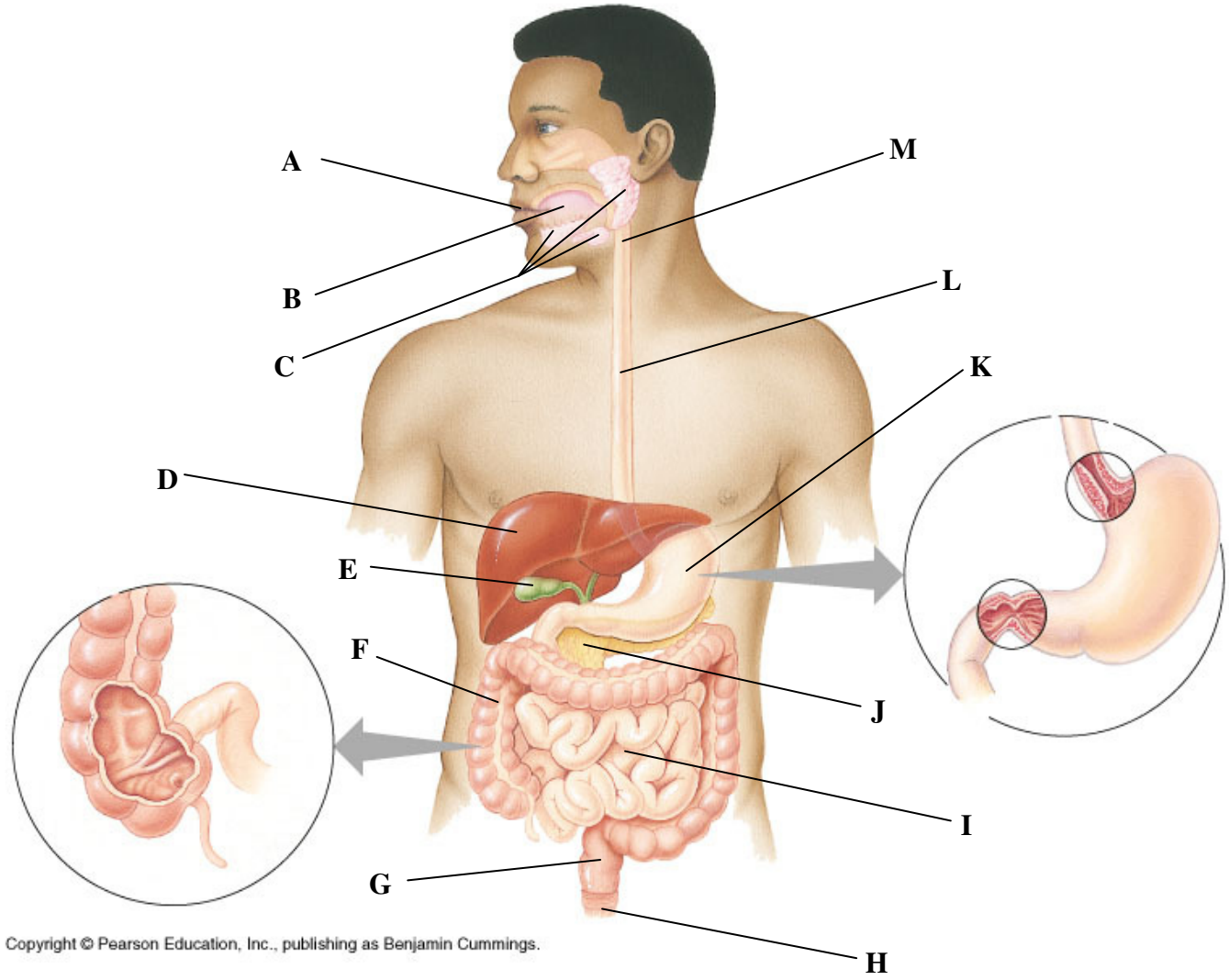
Answers for Concept Map of Digestive System:

1. Absorbs nutrients
2. Produces amylase
3. Mouth
4. Teeth
5. Tongue
6. Esophagus
7. Longitudinal
8. Stomach
9. Peristalsis
10. Fundus
11. Cardiac sphincter
12. Small intestine
13. Rugae
14. Caecum
15. Colon
16. Transverse
17. Wastes
18. Anus
19. Pancreas
20. Liver
21. Bile
22. Duodenum
23. Jejunum
24. Ileum
25. Mesentery
26. Greater omentum
27. Absorbs water

Digestive System Worksheet Name _____

Part 1: Match the name of each organ with the letter that represents it on the diagram below.



___K___ 1. Stomach

___E___ 2. Gall bladder

___A___ 3. Oral cavity (mouth)

___D___ 4. Liver

___F___ 5. Large intestine

___G___ 6. Rectum

___C___ 7. Salivary glands

___J___ 8. Pancreas

___L___ 9. Esophagus

___B___10. Tongue

___I___ 11. Small intestine

___M___ 12. Pharynx

___H___13. Anus

Part 2:

1. Nutrients are a source of raw materials that your body uses for building tissues and fuel for cellular work.

2. Name the four stages of food processing and describe what happens in each stage.

   Ingestion – the act of eating food or drinking
   Digestion – breaking food down into smaller pieces (mechanical digestion) or smaller molecules (chemical digestion)
   Absorption – the uptake of small nutrient molecules into the body
   Elimination – the passage of undigested waste from the body

3. Explain what peristalsis is.

   Peristalsis is a series of wavelike contractions of smooth muscles that propels food along the alimentary canal.

4. List the organs that are part of the alimentary canal.

   Mouth, pharynx, esophagus, stomach, small intestines, large intestines, (rectum & anus)

5. Name 4 organs that are accessory glands or organs in the digestive system.

   Salivary glands, pancreas, liver, & gall bladder

Part 3: Using the key choices below, match the description given with the structure in the alimentary canal that it describes. Choices may be used more than once.

A. Anus	G. Microvilli	L. Salivary Glands
B. Appendix	H. Mouth (Oral cavity)	M. Small intestines
C. Esophagus	I. Pancreas	N. Stomach
D. Gallbladder	J. Pharynx	O. Tongue
E. Large Intestines (Colon)	K. Rectum	P. Villi
F. Liver		

___D___ 1. Stores bile until it is secreted.

___P___ 2. Fingerlike extensions in the intestinal wall that increase surface area

H & N 3. Two anatomical regions where mechanical digestion occurs.

___O___ 4. Organ that mixes food in the mouth.

___J___ 5. Common passage for food and air.

___C___ 6. Literally a food chute; it has no digestive or absorptive role.

___G___ 7. Projections of the plasma membrane of a cell that increase the cell's surface area.

___I___ 8.Produces a juice that neutralizes stomach acid and contains digestive enzymes.

___M___ 9. Organ responsible for absorption of most nutrients.

___E___ 10. Organ primarily involved in water absorption and feces formation.

___B___ 11. Blind sac hanging from the initial part of the colon.

___N___ 12. Organ in which protein digestion begins.

___M___ 13. Organ into which the stomach empties.

___M___ 14. Organ that receives pancreatic juice and bile.

___A___ 15. Opening through which feces are expelled from the body.

___F___ 16. Produces bile.

___L___ 17. Produce enzymes that begin carbohydrate digestion.

___K___ 18. Stores feces until they are excreted.

Part 4: Answer the following questions.

1. What is the end product starch digestion? glucose
2. What is the end product protein digestion? amino acids
3. What is the end product fat digestion? fatty acids & glycerol
4. Where does starch digestion begin? in the mouth
5. Where is starch digestion completed? in the small intestines
6. Where does protein digestion begin? in the stomach
7. Where is protein digestion completed? in the small intestines
8. Where does fat digestion begin? in the small intestines
9. Where is fat digestion completed? in the small intestines
10. Explain the difference between mechanical digestion and chemical digestion.

    Mechanical digestion is a physical process that breaks food into smaller pieces so that there is more surface exposed. It includes chewing and mashing in the mouth, mashing of food in the stomach, and the action of bile in keeping fat droplets dispersed.

    Chemical digestion involves hydrolysis. Monomers in the carbohydrates, fats, and protein in the food are separated from each other.

11. Explain how the small intestines are well adapted for absorption.

    Efficient absorption requires a large amount of surface area. The small intestines provide this surface area in a number of ways. First, the small intestines is the longest organ in the alimentary canal, with a length of over 6 meters. All along this long tube are numerous circular folds with fingerlike projections called villi. These folds provide a huge amount of surface area (about the size of a tennis court). The cells lining each villus have tiny projections called microvilli along their surface, further increasing the absorptive surface. Within each villus is a tiny lymph vessel and a network of tiny blood vessels called capillaries. Together they transport the absorbed nutrients throughout the body.