### Virtual Tour of the Digestive System

**Directions:** Visit the following website [http://kitses.com/animation/digestion.html](http://kitses.com/animation/digestion.html) to begin the virtual tour of the digestive system. Follow the directions below as you trace food as it enters and leaves through digestion.

1. Click start to begin. Choose a food to be digested and trace the path of this item describing what happens at each stage. My food is _______________________.
   My food contains the following nutrients: ___________________________________

   **Stop #1 on the tour: M__________**
   What Happens?
   1. 
   2. 
   3. 

   **Stop #2 on the tour: S__________**
   What Happens?
   1. 
   2. 

   **Stop #3 on the tour: D__________**
   What Happens?
   1. 
   2. 
   3. 

   *Note: the duodenum is the beginning of the small intestine.

   **Stop #4 on the tour: I_______**
   What Happens?
   1. 
   2. 

   *Note: the ileum is the end of the small intestine.

   **Stop #5 on the tour: C_______**
   What Happens?
   1. 
   2. 
   3. 

And the last stop is the a__________, where undigested waste is eliminated.

* Get another type of food and try it again!
Use the words from the word bank to label each part of the digestive system and complete the story. Some words may be used more than once.

Hello! I'm Mac A. Roni. I'm here to tell you about my journey through the human digestive tract.

It all started when Jack got hungry, so he decided to eat me. First, I entered Jack's _________. Here, he chewed me up into little bits, and I was moistened with __________. I was swallowed in one big gulp and made my way down a tube called the __________.

Soon after, I dropped into the ________ where I was mixed with __________. The stomach's main job is to change food into a _______. I was squeezed for awhile until I passed into the ________.

In the small intestines, I was mixed with __________. This substance comes from the _________. It changes ________ into __________ and splits fats. Bile is also found in the small intestine. It is made in the _________. It helps break down and absorb __________ into the body. By the time I left the small intestine, there wasn't much left of me!

Finally, I passed into the __________. This organ takes leftover water and __________ from the body. Food waste is stored here until it is ready to be eliminated from the body.

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**Word Bank**

- esophagus
- fats
- minerals
- mouth
- gastric juice
- pancreas
- large intestine
- saliva
- small intestine
- simple sugars
- starches
- stomach
- liver
- liquid
1. Which process must first take place in order for the proteins in foods to be used by body cells?
   (1) digestion  (2) synthesis  (3) storage  (4) excretion

2. Which row in the chart below correctly identifies the main function of these systems?

<table>
<thead>
<tr>
<th>Row</th>
<th>System A</th>
<th>System B</th>
<th>System C</th>
<th>System D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>response</td>
<td>excretion</td>
<td>circulation</td>
<td>digestion</td>
</tr>
<tr>
<td>(2)</td>
<td>movement</td>
<td>response</td>
<td>circulation</td>
<td>digestion</td>
</tr>
<tr>
<td>(3)</td>
<td>response</td>
<td>circulation</td>
<td>excretion</td>
<td>digestion</td>
</tr>
<tr>
<td>(4)</td>
<td>movement</td>
<td>circulation</td>
<td>digestion</td>
<td>reproduction</td>
</tr>
</tbody>
</table>

3. An individual eats a hamburger. Which two systems must interact to transfer the nutrients in the hamburger to human muscle tissue?
   (1) respiratory and excretory  (3) digestive and circulatory
   (2) digestive and immune  (4) circulatory and respiratory

4. Although the digestive system is primarily responsible for the breakdown of food, this process can be disrupted if the circulatory system malfunctions. The best explanation for this disruption is that
   (1) human body systems interact with each other to perform life functions
   (2) the circulatory system is the control center of the body
   (3) the digestive system and the circulatory system have many organs in common
   (4) the circulatory system is responsible for the coordination of life functions, including the breakdown of food

5. The organ represented by X in the diagram is the
   (1) Pancreas
   (2) Liver
   (3) Gallbladder
   (4) Stomach
6. In a human, the movement of glucose from the digestive tract to muscle cells is most directly a result of
   (1) ingestion and digestion  (3) anaerobic respiration
   (2) absorption and circulation  (4) protein synthesis

7. The main function of the human digestive system is to
   (1) rid the body of cellular waste materials
   (2) process organic molecules so they can enter cells
   (3) break down glucose in order to release energy
   (4) change amino acids into proteins and carbohydrates

8. Three days after an organism eats some meat, many of the organic molecules originally contained in the meat would be found in newly formed molecules of
   (1) glucose  (3) starch
   (2) protein  (4) oxygen

9. The enzyme pepsin is produced in the cells of the stomach but not in the cells of the small intestine. The small intestine produces a different enzyme, trypsin. The reason that the stomach and small intestine produce different enzymes is that the gene that codes for pepsin is
   (1) in the cells of the stomach, but not in the cells of the small intestine
   (2) expressed in the stomach but not expressed in the small intestine
   (3) mutated in the small intestine
   (4) digested by the trypsin in the small intestine

10. Which order of metabolic processes converts nutrients consumed by an organism into cell parts?
    (1) digestion → absorption → circulation → diffusion → synthesis
    (2) absorption → circulation → digestion → diffusion → synthesis
    (3) digestion → synthesis → diffusion → circulation → absorption
    (4) synthesis → absorption → digestion → diffusion → circulation

11. Which two organ systems provide materials required for the human body to produce ATP?
    (1) reproductive and excretory
    (2) digestive and respiratory
    (3) respiratory and immune
    (4) digestive and reproductive