

Down the Hatch

Cross-Curricular Focus: Life Science



A car needs energy to get where it's going. Your body must have fuel to do all the things it needs to do so you can grow up healthy and strong. The **digestive** system takes care of the body's need for fuel. It is made up of a group of organs that work together. They pass fuel in the form of food from one organ to the next until the entire process is complete. Waste products then pass out of the body.

The digestive system goes to work the moment you put food into your mouth. Immediately, the salivary glands in your mouth moisten the food. The saliva begins breaking down the food into smaller and smaller pieces. Your teeth also get involved, biting and grinding the large pieces. Finally, the pieces are small enough to swallow. Your tongue is kind of like a traffic director, pushing food around in your mouth to make the most of your saliva and teeth. Then, your tongue pushes your food to the back of your mouth so you can swallow.

As your food leaves your mouth, it enters a tube called the **esophagus**. Gravity and muscles push your food down to the **stomach**. In the stomach it is greeted by strong acids. During the next couple of hours, acids and enzymes break your food into a soupy liquid.

Believe it or not, your body has still not received energy from your food. Your liquefied food finally passes into the small **intestine**. This is a long tube that is coiled back and forth inside your body. The food will remain there for up to six hours. During that time, special chemicals digest the liquid even further. Nutrients your body needs are pulled from it. The nutrients enter your blood through tiny little finger-like projections called villi that line the insides of your small intestine.

What happens to the leftovers? The things your body does not need pass into your large intestine. Water and minerals are absorbed out of the food and into your blood over the next 10-36 hours. After most of the liquid is removed, the rest of the leftover material passes out of your body as solid waste.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Explain what happens to food while it is still in your mouth. _____

2) What is the name for the tube from the mouth to the stomach? _____

3) What are villi?

4) At what point during the digestive process does your body begin to receive energy from the food?

5) Where is your food likely to be two hours after you eat?
