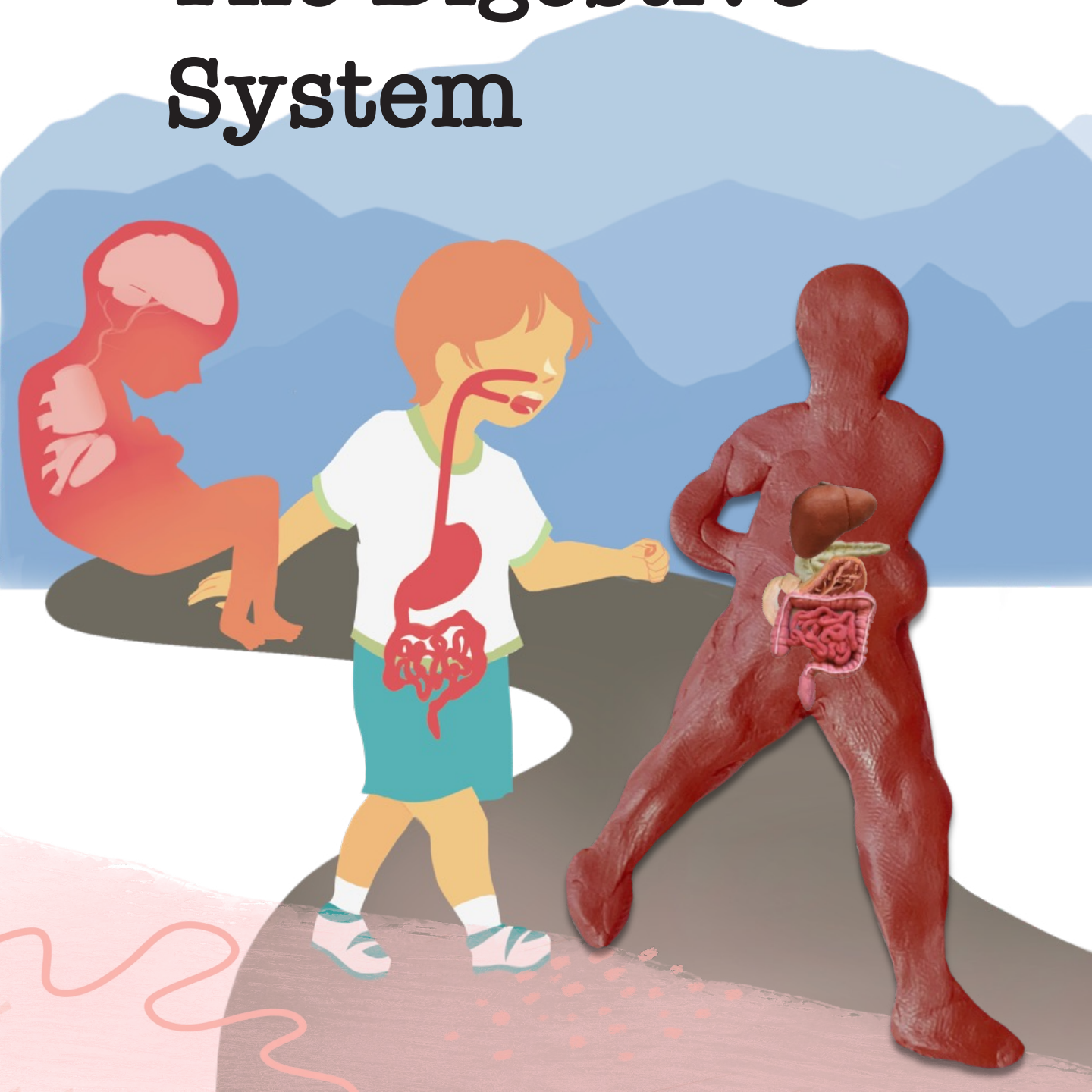
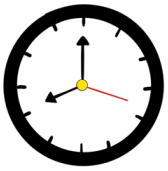
The Digestive System



Mouth

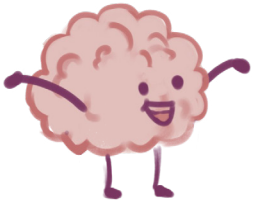
The mouth is the beginning of the digestive system. As food enters the body through the mouth, your teeth chew the food and your salivary glands produce saliva to help form a bolus. The saliva contains an enzyme that breaks down starches in your food. Afterwards, the food passes through the pharynx, also known as the throat. It carries food, liquid, and air to the esophagus.

Esophagus



Fun Fact!

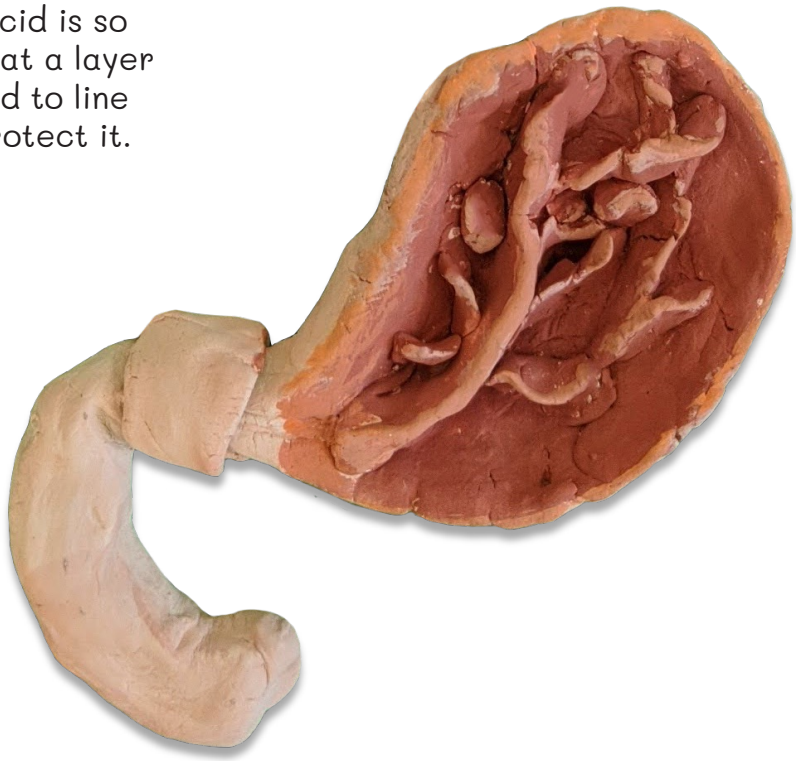
It takes only 7 seconds for the esophagus to propel the food from the throat into the stomach.



The esophagus carries food from the throat to the stomach. Food doesn't just slide down the esophagus; rather, muscles along the sides squeeze and push the food down.

Stomach

The stomach digests the food, acting like a blender so we can receive suffcient nutrients to survive. Inside the stomach, gastric acid is produced to break down proteins in meat and fibrous plants. Stomach acid is so acidic (pH = 2), that a layer of mucus is needed to line the stomach to protect it.



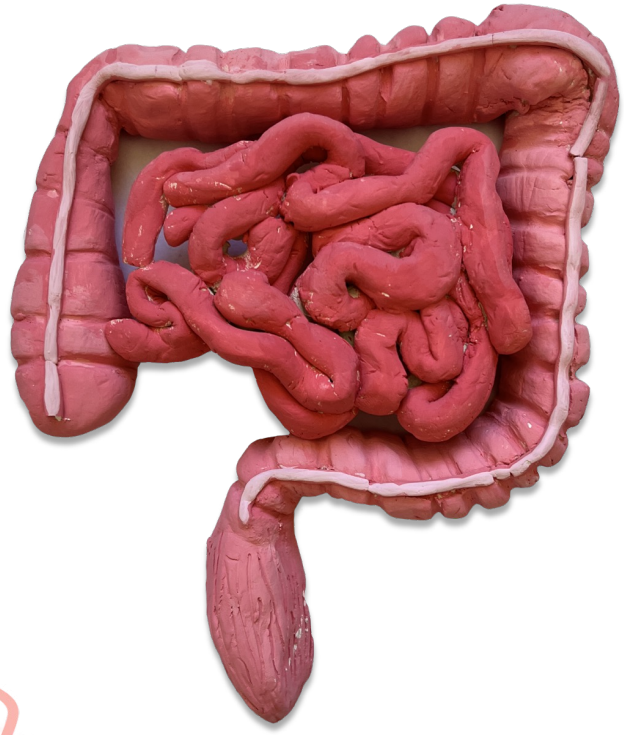
Intestines

The **small intestine** further digests the food and absorbs nutrients such as vitamins, carbohydrates, minerals, fats, and proteins. These nutrients cross the intestinal lining into the bloodstream and get delivered to cells around the body.

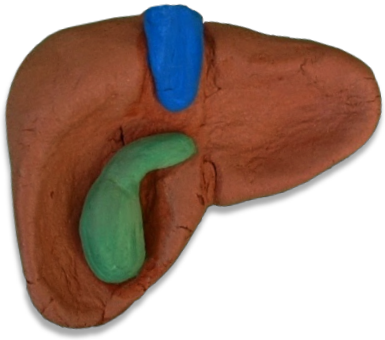
The remaining food is pushed through the **large intestine** where the remaining water and salt is sucked out. The waste that is left behind is eliminated through the rectum.

Fun Fact!

The small intestine is 3 times the length of a human.



Liver + Gallbladder



The liver acts as the main purifier for blood, killing harmful bacteria. Almost all of our blood passes through the liver at one point, where cells in the sinusoid channels called Kupffer cells detoxify the blood by filtering it. The liver also helps with digestion and stores important glucose, vitamins, and the minerals. The gallbladder, located beside the liver, produces and stores bile. Bile is then released into the first section of the small intestine, where it breaks down fats during digestion.

Pancreas

The main function of the pancreas is to regulate blood sugar levels and the rate of metabolism. The pancreas also helps with digestion by secreting a variety of enzymes and hormones that are released into the small intestine.

For example, insulin and glucagon are made in the pancreas and released to help regulate blood glucose (sugar) levels. If the pancreas doesn't produce enough insulin or respond well to it, the person may have diabetes.