

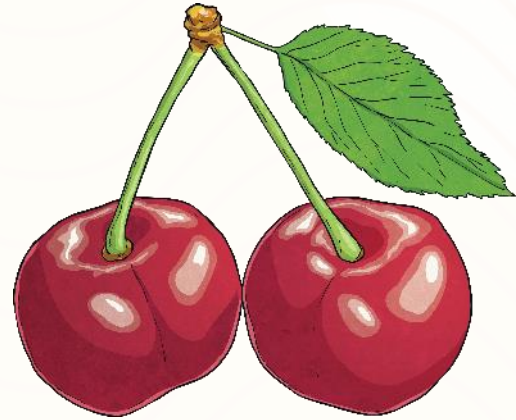
# The Digestive System



# What Is the Digestive System?

The digestive system is the body system that breaks down the food we eat.

It is made of a series of organs that work together to turn the food we eat into energy and nutrients that our body needs to live.



# Turn and Talk

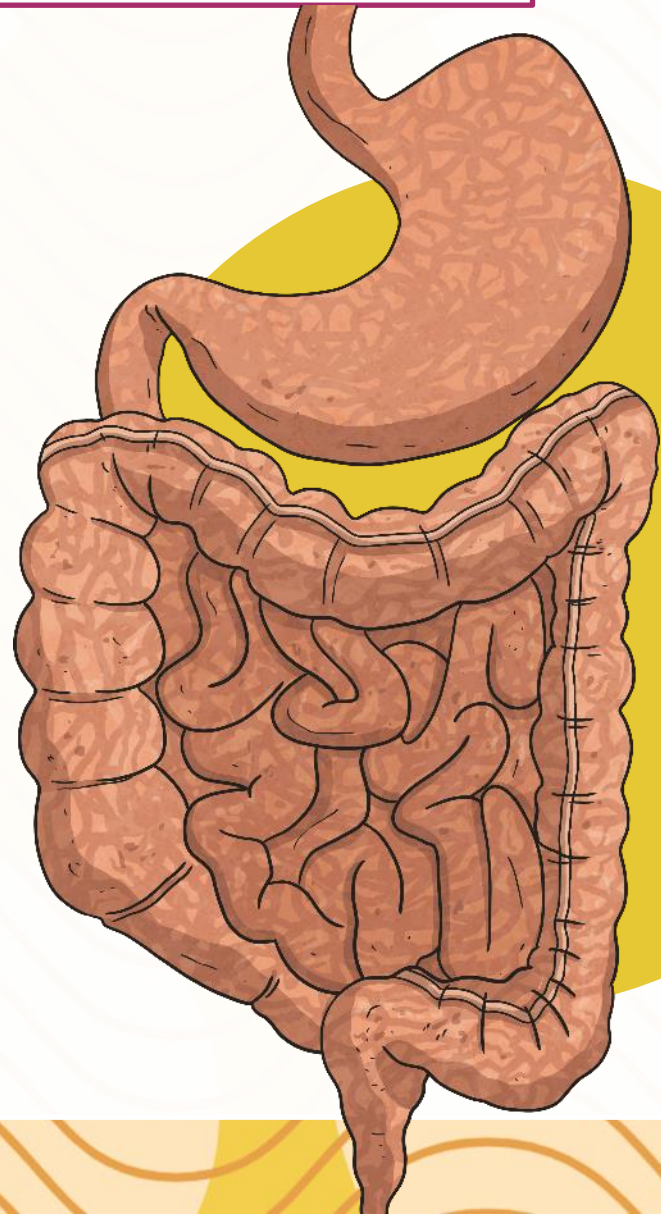


What do you already know about the digestive system?

# The Parts of the Digestive System

The digestive system is made up of the digestive tract. This is a long tube of organs that runs from the mouth to the anus. The digestive tract is also called the gastrointestinal tract (GI) or the alimentary canal.

Some organs are part of the digestive system that are not included in the digestive tract. They are the liver, gallbladder, and pancreas. These organs work to break down the food with enzymes and chemicals.



# Turn and Talk



Tell your partner about two organs or glands that you think are part of the digestive tract. Explain why you think that.

# The Digestive Tract



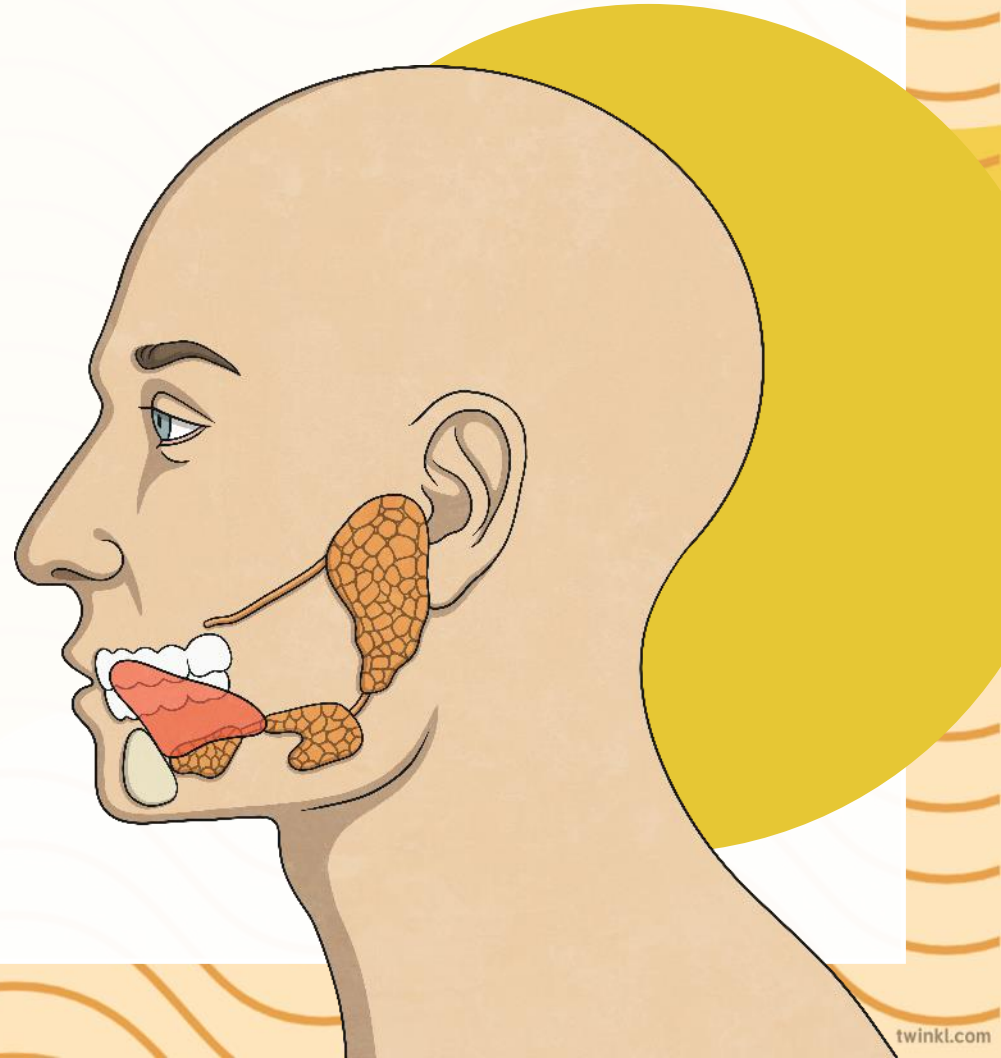
The digestive tract includes the mouth, the pharynx (throat), esophagus, stomach, and intestines. These organs create a path for food to move through the body.

# The Mouth

Digestion begins at the mouth. We put food into our mouths and use our teeth to chew it. This is the beginning of breaking our food down into digestible pieces.

Our mouth has glands that produce saliva. Our tongue mixes the saliva with the chewed food. This makes the food easier to swallow.

Once we swallow our food, it passes through our throat (pharynx) and into the next part of the digestive tract: the esophagus.



# Turn and Talk



Thinking about what you know about the mouth's role in digestion, tell your partner what you think is the most important part.



# The Esophagus



The esophagus is a muscular tube that helps food move from the throat to the stomach.

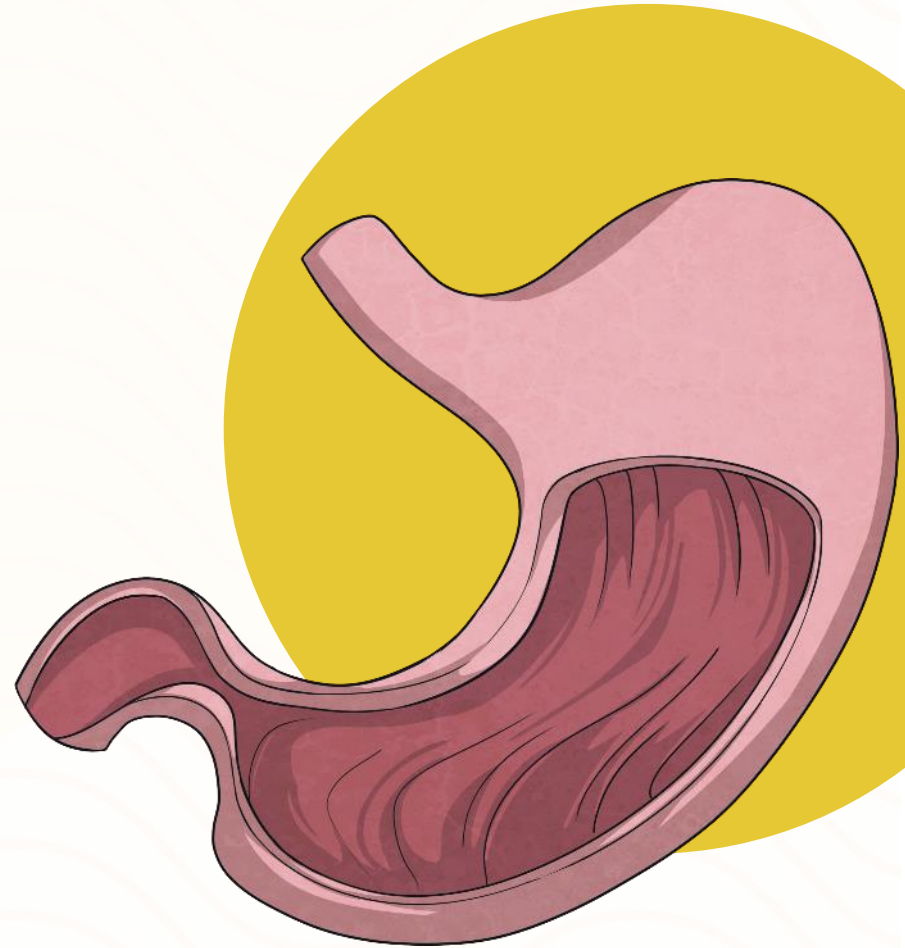
The walls of the esophagus move in waves called peristalsis. This process helps the food move down into the stomach.

# The Stomach

The stomach contains millions of glands that produce digestive juices with enzymes and hydrochloric acid. This helps break the food down further.

A muscular ring called a **sphincter** squeezes shut after letting the food pass from the esophagus. This keeps the food in the stomach and keeps it from coming back up the esophagus.

Muscles in the stomach mix the food with the digestive juices to create **chyme**. Once the chyme is ready to enter the small intestine, another muscular valve called the **pylorus** releases it.

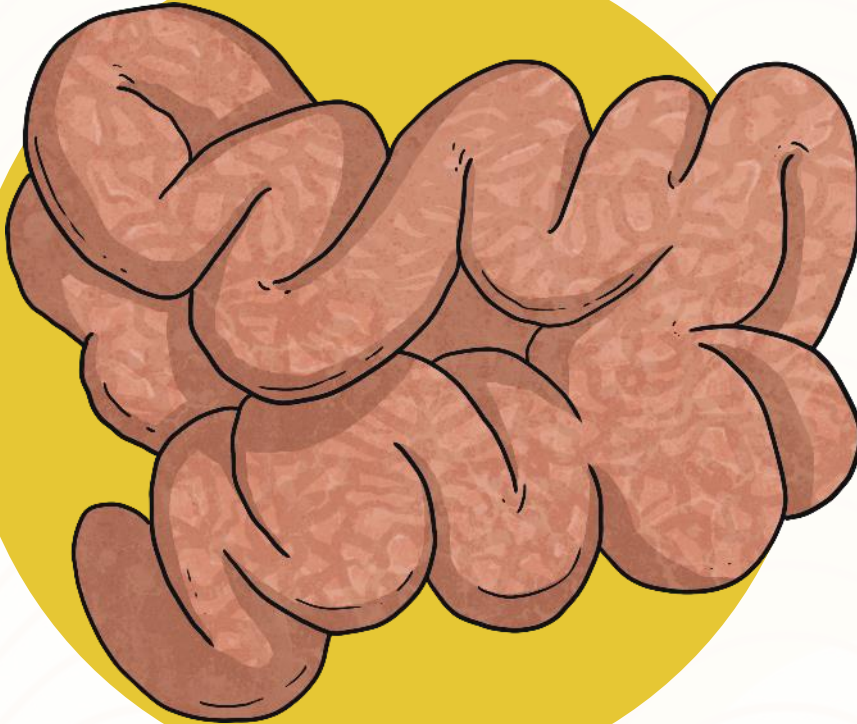


# Turn and Talk



Tell your partner two new things you learned about how the esophagus and the stomach work together to help you digest food.

# Small Intestine



The small intestine is where many of the nutrients from your food get absorbed into your bloodstream. There are three parts to the small intestine:

- The **duodenum** is a c-shaped part at the top where enzymes and bile from the pancreas and liver are added to the chyme.
- The **jejunum** is the middle part that digests the chyme and absorbs nutrients.
- The **ileum** is the bottom part that leads into the large intestine. This part absorbs nutrients, vitamin B12, and bile acids.

# Small Intestine

Food stays in the small intestine for hours. It is the longest part of the digestive system at 22-25 feet long.

During its time in the small intestine, most of the food is broken down into simple chemicals. These chemicals go into the bloodstream through the walls of the small intestine. The blood carries the chemicals to the body's cells. The body uses this for energy and growth.

# Turn and Talk

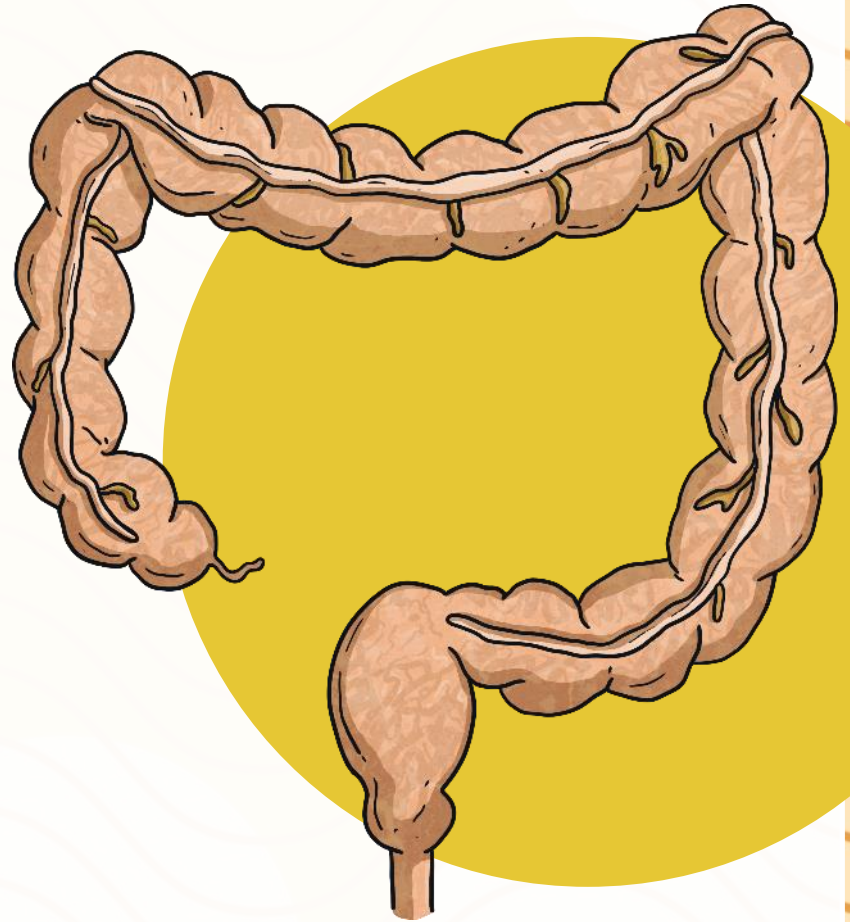


In your own words, describe what happens in the small intestine.

# Large Intestine

Most of the food is broken down in the small intestine. There are some things, like plant fibers, that cannot be broken down. This is considered waste. Waste enters the next part of the digestive system: the large intestine.

The large intestine is often referred to as the colon. The large intestine is not as long as the small intestine, but it is wider.



# Large Intestine

The first part of the colon absorbs fluids and salt. The second part removes more water, turning the waste from a liquid into a solid.

The last part of the colon is for holding waste. The waste stays there until it is passed out of the body.

There are many bacteria in the colon. They help in digesting the rest of the food products. They also produce folic acid and help the body absorb vitamins.

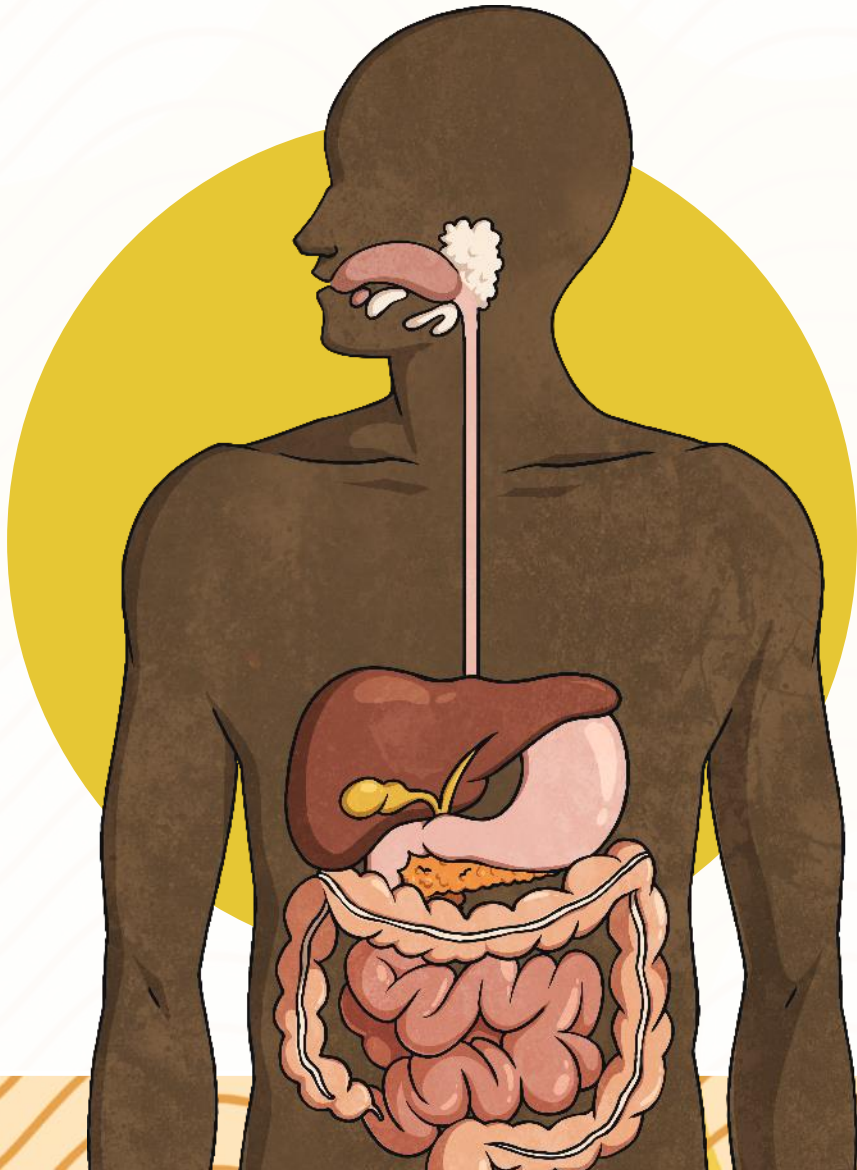


# Turn and Talk



Tell your partner two ways that the colon helps your body digest food.

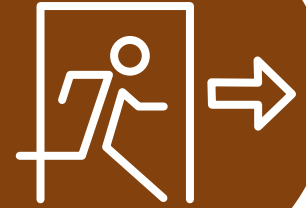
# The Digestive System



The digestive system works together with other parts of the body to ensure that you have the proper amount of energy and nutrients to live.

The digestive process is not fast. It can take days for food to completely pass through the digestive system and leave the body as waste.

# Exit Ticket



How does the digestive system work with other body systems?

