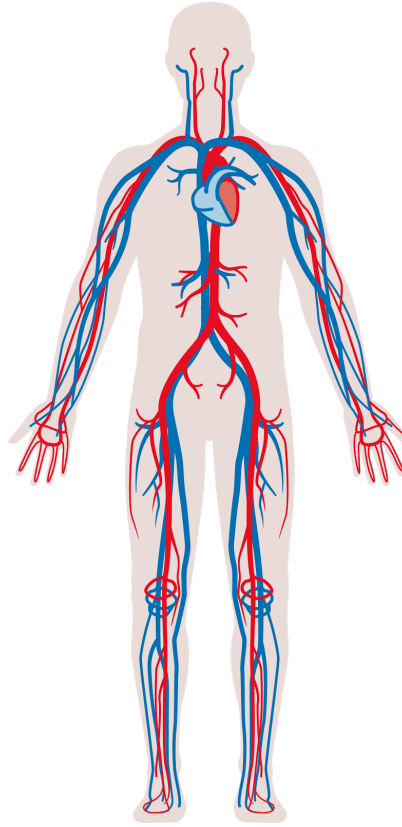


Body Systems Resource Cards

Card 1: Circulatory System



Function of the Circulatory System

- Carries oxygen and nutrients to cells in the body and carries carbon dioxide away from cells to lungs

Functions of Major Organs

- **Heart:** Pumps blood carrying oxygen from the lungs to all cells in the body and pumps blood back to the lungs once the oxygen has been used up
- **Arteries:** Tubes that carry blood to all body parts from the heart
- **Veins:** Tubes that carry blood from the body to the heart

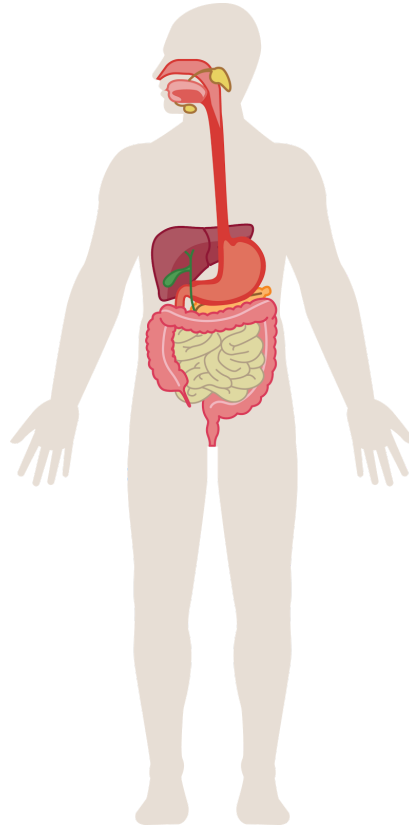
Connections between Systems

The circulatory system **communicates** and **collaborates** with other systems so that the entire body can **function**.

- Blood vessels travel to all other systems (**digestive, nervous, muscular**) to carry nutrients and oxygen to the cells that need them.
- Red blood cells travel to the lungs (**respiratory system**) via blood vessels to get rid of carbon dioxide and pick up oxygen that has been breathed in.
- The **nervous system**, especially the brain, controls how fast the heart beats depending on the physical activity of the body.

Body Systems Resource Cards

Card 2: Digestive System



Function of the Digestive System

- Breaks down large food molecules into tiny food molecules that can move through the intestine walls, into the blood, and then into each cell

Functions of Major Organs

- **Mouth:** Mechanically breaks down food by chewing
- **Stomach:** Grinds up food and mixes the food with digestive juices, which turns the food into a liquid mush
- **Intestines:** Break up food into tiny particles that can move through the intestinal wall into the blood

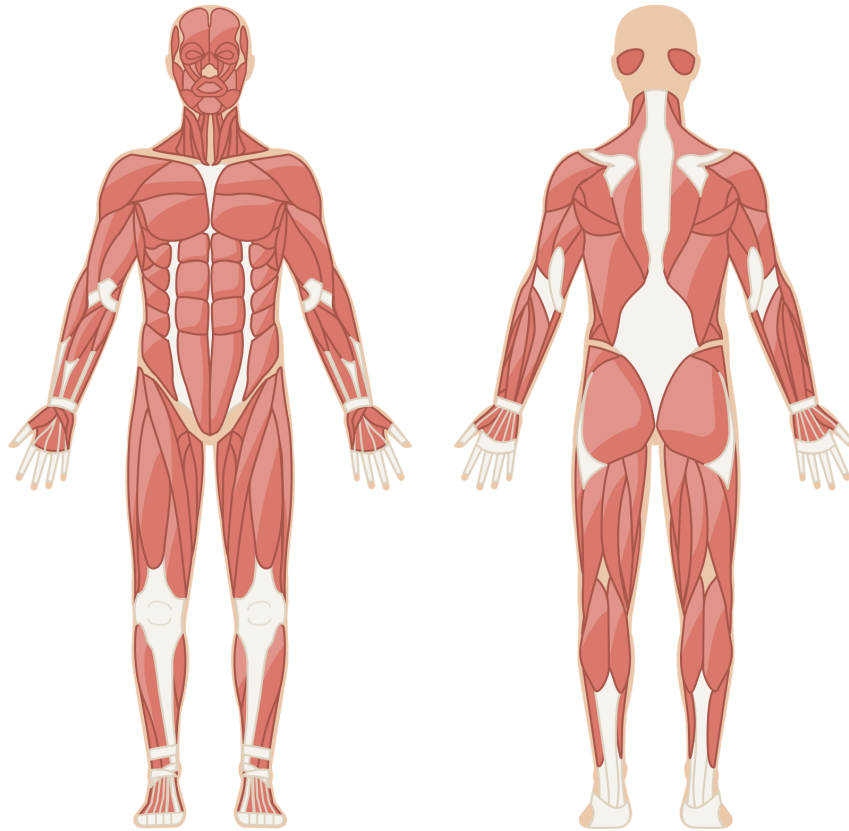
Connections between Systems

The digestive system **communicates** and **collaborates** with other systems so that the entire body can **function**.

- Muscles (**muscular system**) control most of the movement of food inside the **digestive system**, such as the squeezing action of the esophagus and intestines and the grinding of the stomach.
- The **nervous system** communicates with the **digestive system** to tell it when to be active and when to rest.
- The **circulatory system** provides oxygen to all the intestinal cells so that they can function. The **circulatory system** also picks up nutrients from the **digestive system** and carries them away to other parts of the body that need them.

Body Systems Resource Cards

Card 3: Muscular System



Function of the Muscular System

- To move the body's parts, both external (such as arms and legs) and internal (lungs, stomach, and heart)

Functions of Major Organs

- **Voluntary muscles:** Move when a person wants them to move (like lifting an arm or smiling)
- **Involuntary muscles:** Move things a person doesn't normally control—for example, they help the small intestine squeeze to move digesting food through to the end, and control breathing so a person breathes every 5 seconds without thinking about it

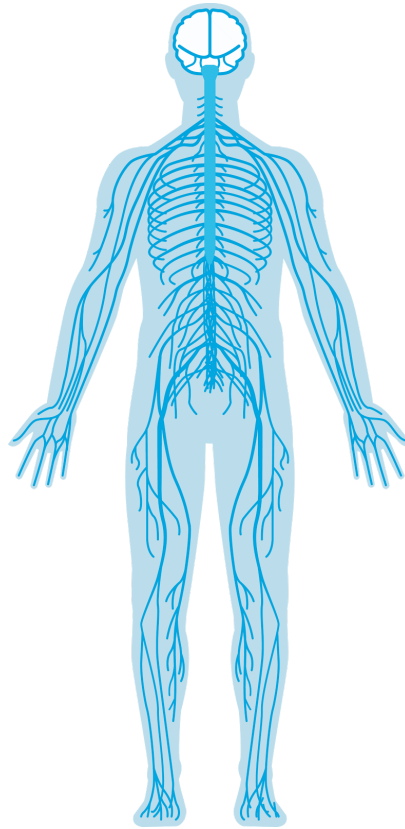
Connections between Systems

The muscular system **communicates** and **collaborates** with other systems so that the entire body can **function**.

- Muscles (**muscular system**) receive messages from the brain (**nervous system**) telling the muscles what to do.
- Involuntary muscles (**muscular system**) control the stomach and small intestine (**digestive system**) to help move the food through the system as it gets broken down into small useable parts.
- The heart muscle (**muscular system**) allows the heart to pump blood (**circulatory system**) throughout the body.
- The blood vessels (**circulatory system**) travel to every muscle in the body (**muscular system**) to provide oxygen and nutrients and take away carbon dioxide and waste.

Body Systems Resource Cards

Card 4: Nervous System



Function of the Nervous System

- To control the actions of the body, store memories, and process information from the outside world

Functions of Major Organs

- **Nerves:** Receive and send messages very quickly throughout the body
- **Brain:** Stores and processes information and controls the body's actions
- **Spinal cord:** Provides a link between the nerves and the brain so that they can communicate and work together
- **Sensory organs:** Convey information about the environment to the brain, specifically information from the eyes, ears, nose, tongue, and skin

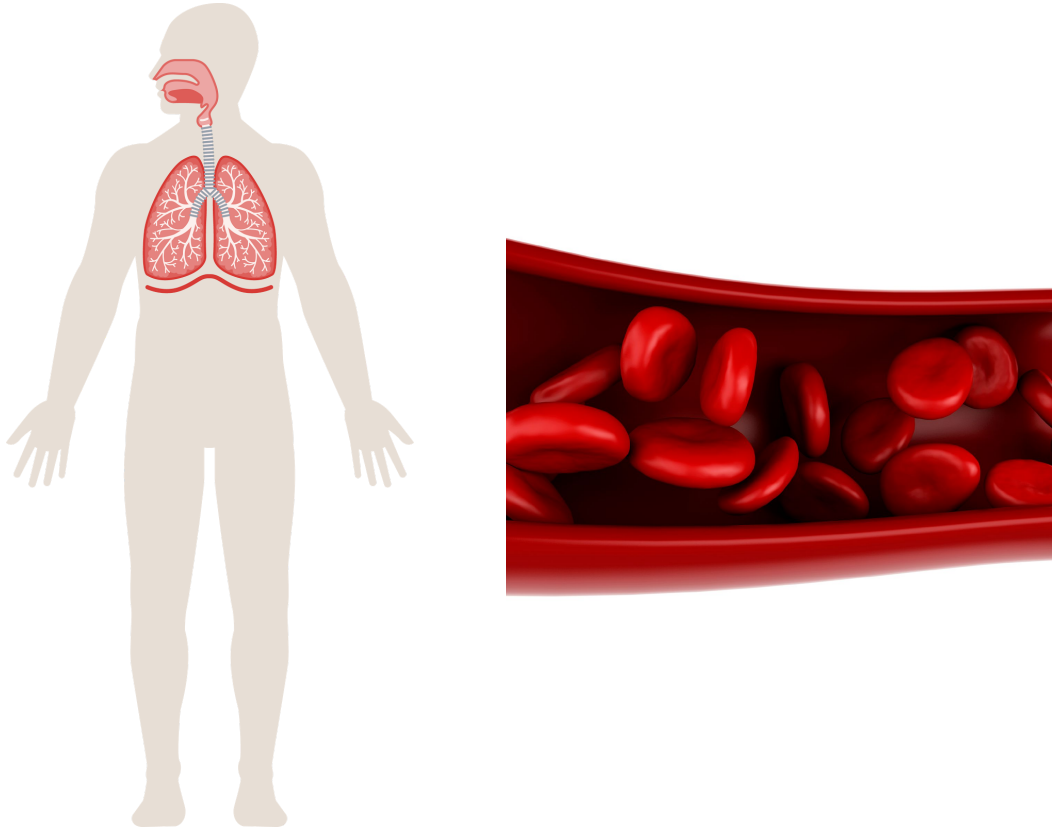
Connections between Systems

The nervous system **communicates** and **collaborates** with other systems so that the entire body can **function**.

- Nerves (**nervous system**) send messages to muscles (**muscular system**) to tell them how and where to move.
- The **nervous system** sends and receives messages to decide when it's time to digest food (**digestive system**).
- Nerves receive messages from the skin, eyes, nose, ears, and mouth (**sensory organs**) to gather information about the environment in order to create a memory or cause an effect like movement.
- Nerves (**nervous system**) check up on the body's need for oxygen in the muscles (**muscular system**) and adjust breathing rate (**respiratory system**) and heart rate (**circulatory system**) as needed.

Body Systems Resource Cards

Card 5: Respiratory System



Function of the Respiratory System

- Brings oxygen into the body and sends carbon dioxide out of the body

Functions of Major Organs

- **Mouth and nose:** Bring in air full of oxygen from the outside and send out air full of carbon dioxide
- **Lungs:** Provide an environment in which oxygen can enter the blood and carbon dioxide can leave the blood

Connections between Systems

The respiratory system **communicates** and **collaborates** with other systems so that the entire body can **function**.

- Blood vessels (**circulatory system**) bring red blood cells with no oxygen attached to them to the lungs (**respiratory system**). Red blood cells attach to oxygen in the lungs. The red blood cells carry the oxygen they pick up to all body parts.
- The brain (**nervous system**) checks up on the amount of carbon dioxide in the blood and adjusts the rate of breathing (**respiratory system**). The brain “communicates” with the lungs using nerves from the brain to the lungs.