

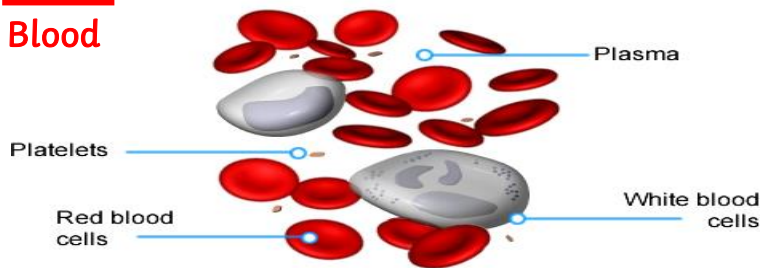
## Sticky Knowledge

- ✓ The entire trip around your body only takes blood about 20 seconds in total.
- ✓ Your heart can be kept healthy with a well-balanced diet and exercise, as well as avoiding things that can damage it, such as smoking, drugs or foods with high cholesterol.
- ✓ Cardiovascular exercises are designed to improve the fitness of the circulatory system.

## Learning Components

- I know that the heart, lungs, veins, arteries and capillaries are part of the circulatory system.
- I know that the heart pumps blood and works by controlled contractions and the use of one-way valves.
- I know that blood is circulated through blood vessels to deliver oxygen to the body and to help remove carbon dioxide as part of respiration (breathing).
- I know that heart rate changes through exercise.
- I know that diet, exercise and the use of drugs affects a person's health.

## Blood



**Red Blood Cells:** Transport oxygen.

**White Blood Cells:** Protect against disease.

**Blood Platelets:** Help the blood clot and repair cuts and grazes.

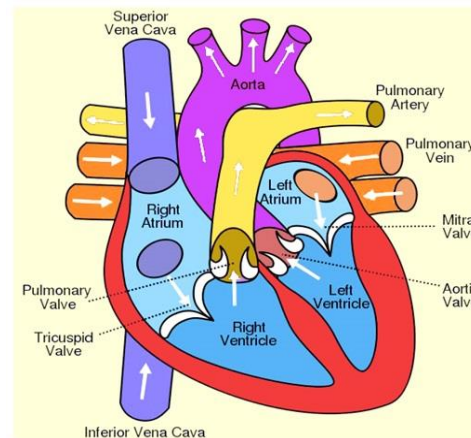
**Plasma:** The liquid that carries the cells and transports nutrients.

## Big Idea

The body is made up of tissues and organs, which are linked together to do particular functions. The heart and lungs are such organs, which work together as part of the circulatory (cardiovascular) system, transporting oxygen, sugar and nutrients around our bodies.

## The Circulatory System:

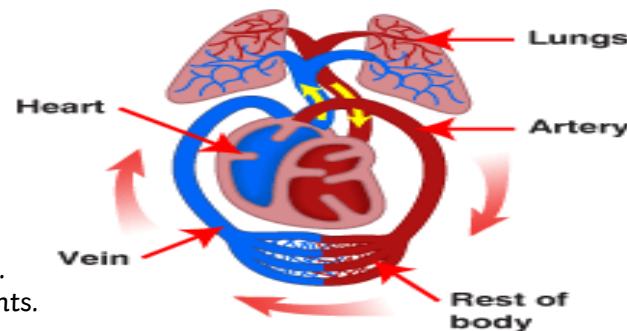
### The Heart



**Veins:** Thin, flexible tubes which carry blood towards the heart.

**Arteries:** Muscular tubes which carry blood away from the heart.

**Capillaries:** Microscopic tubes which travel throughout the entire body, linking tissues to veins and arteries.



## Vocabulary

**Heart:** Organ, which pumps blood at high pressure around the body by regular contracting (squeezing) and relaxing.

**Pulse (rate):** Your heart has to push so much blood through your body that you can feel a little thump in your arteries each time the heart beats.

**Blood:** A body fluid which contains platelets, red and white blood cells within plasma. Red blood cells carry oxygen. White blood cells are part of the body's immune system.

**Blood Vessels:** Blood vessels are a series of tubes inside your body called veins, arteries and capillaries. They move oxygenated and deoxygenated blood to and from your heart via all tissues of the body.

**Lungs:** Organs designed to take oxygen from the air and deliver it into the blood stream. They also remove carbon dioxide from the blood and back into the air.

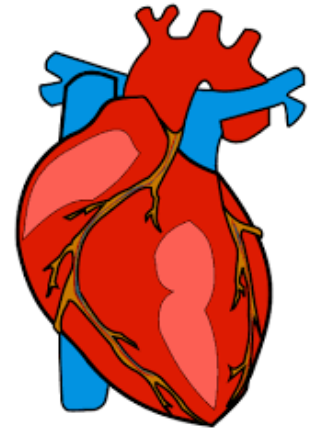
**Oxygen:** A gas required by living things.

**Drugs:** A drug is a chemical that is not food and that affects your body. Some drugs are given to people by doctors to make them healthy.

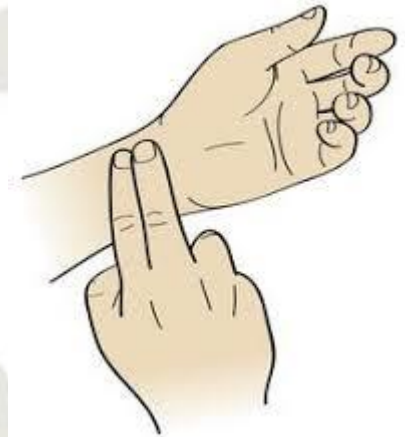
**Carbon Dioxide:** A waste gas created through breathing (respiration).

**Circulatory System:** Also called the cardiovascular system, delivers nutrients and oxygen to all cells in the body.

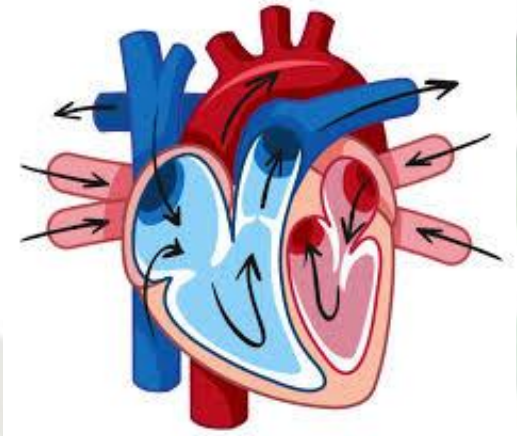
# Heart



# Pulse (Rate)



# Pumps



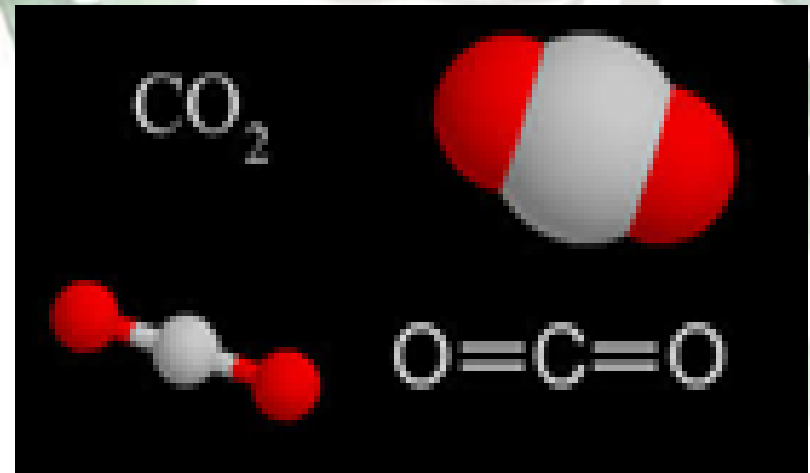
# Blood



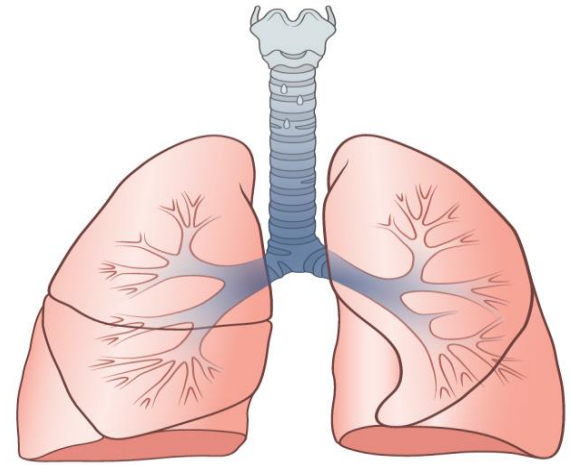
# Blood Vessels



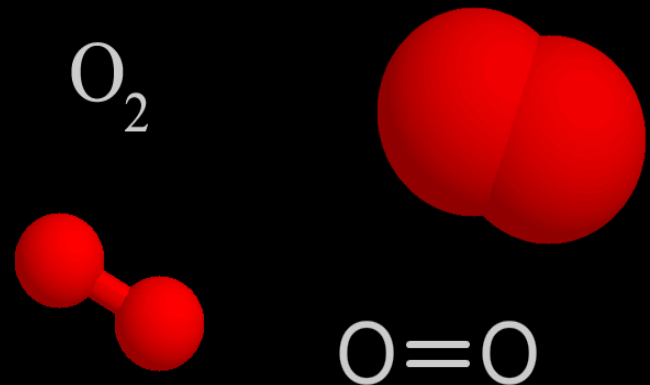
# Carbon Dioxide



# Lungs



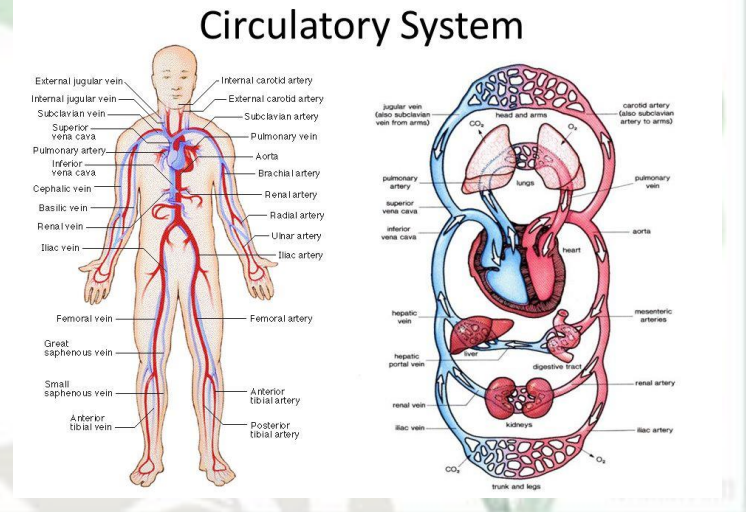
# Oxygen



# Drugs

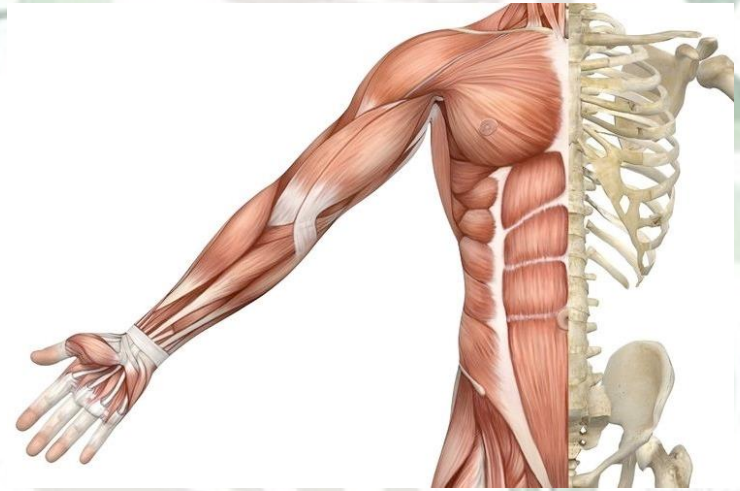


# Circulatory System



# **Additional Vocabulary**

# Muscles



# Nutrients

