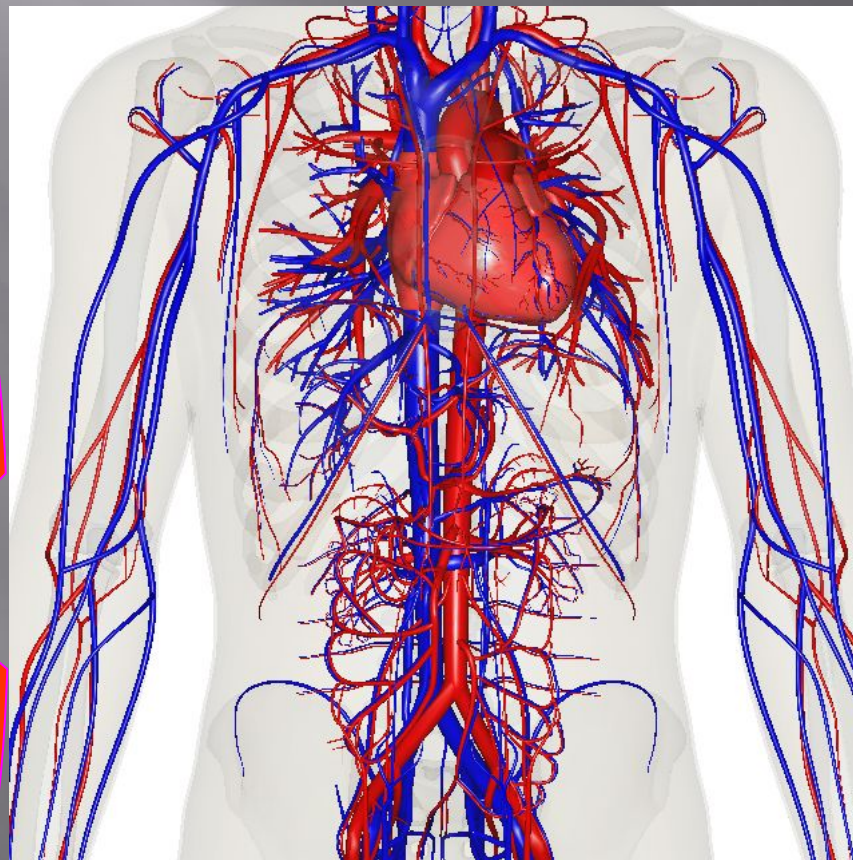


Circ



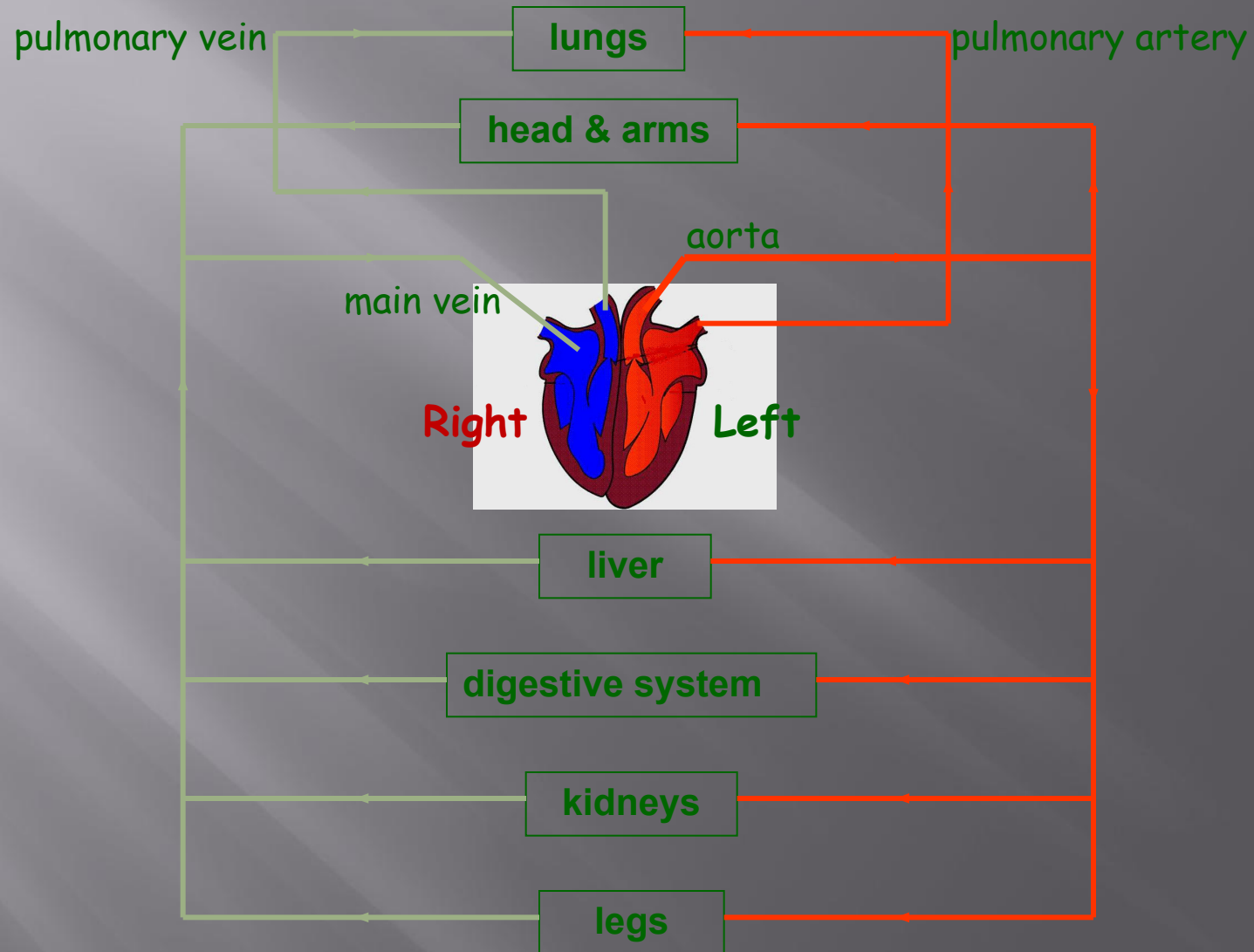
stem

By Shevchenko Taras
m.II-25

What is the circulatory system?

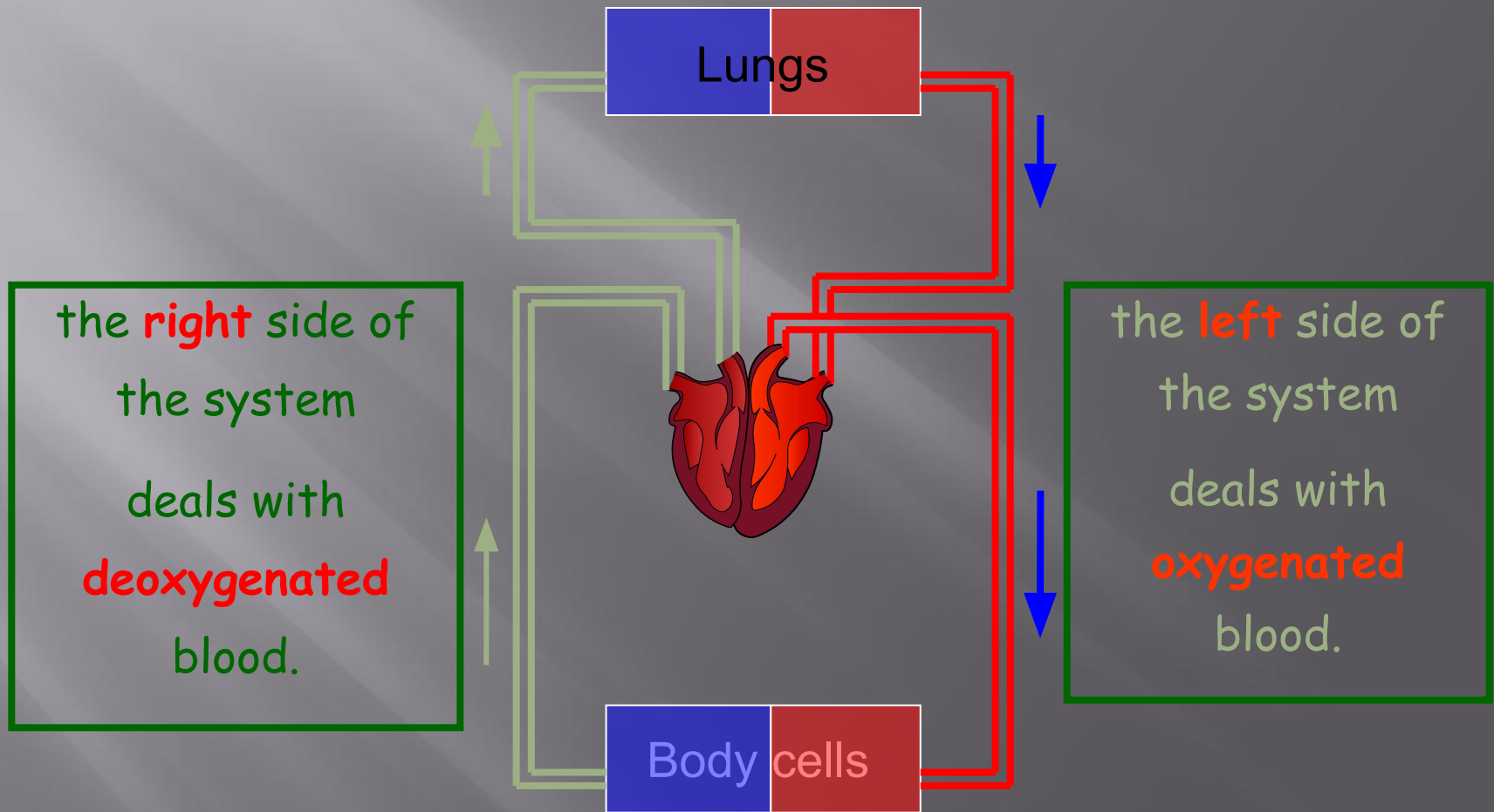
- The circulatory system carries blood and dissolved substances to and from different places in the body.
- The Heart has the job of pumping these things around the body.
- The Heart pumps blood and substances around the body in tubes called blood vessels.
- The Heart and blood vessels together make up the **Circulatory System**.

How does this system work?



Circulatory System

Our circulatory system is a double circulatory system.
This means it has two parts.



The Heart

This is a **vein**. It brings blood from the body, except the lungs.

These are **arteries**. They carry blood away from the heart.

2 atria

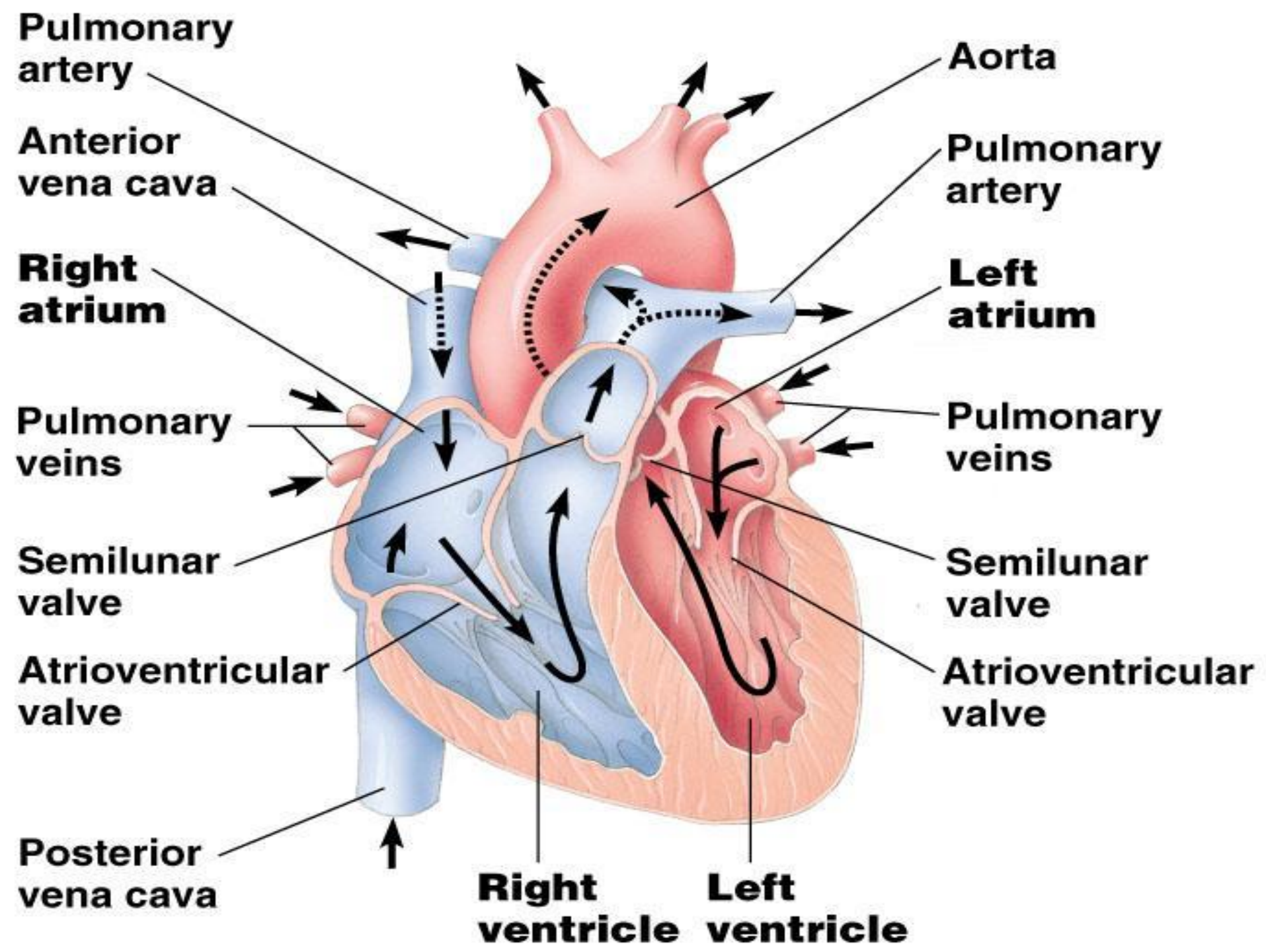
2 ventricles

Coronary arteries, the hearts own blood supply

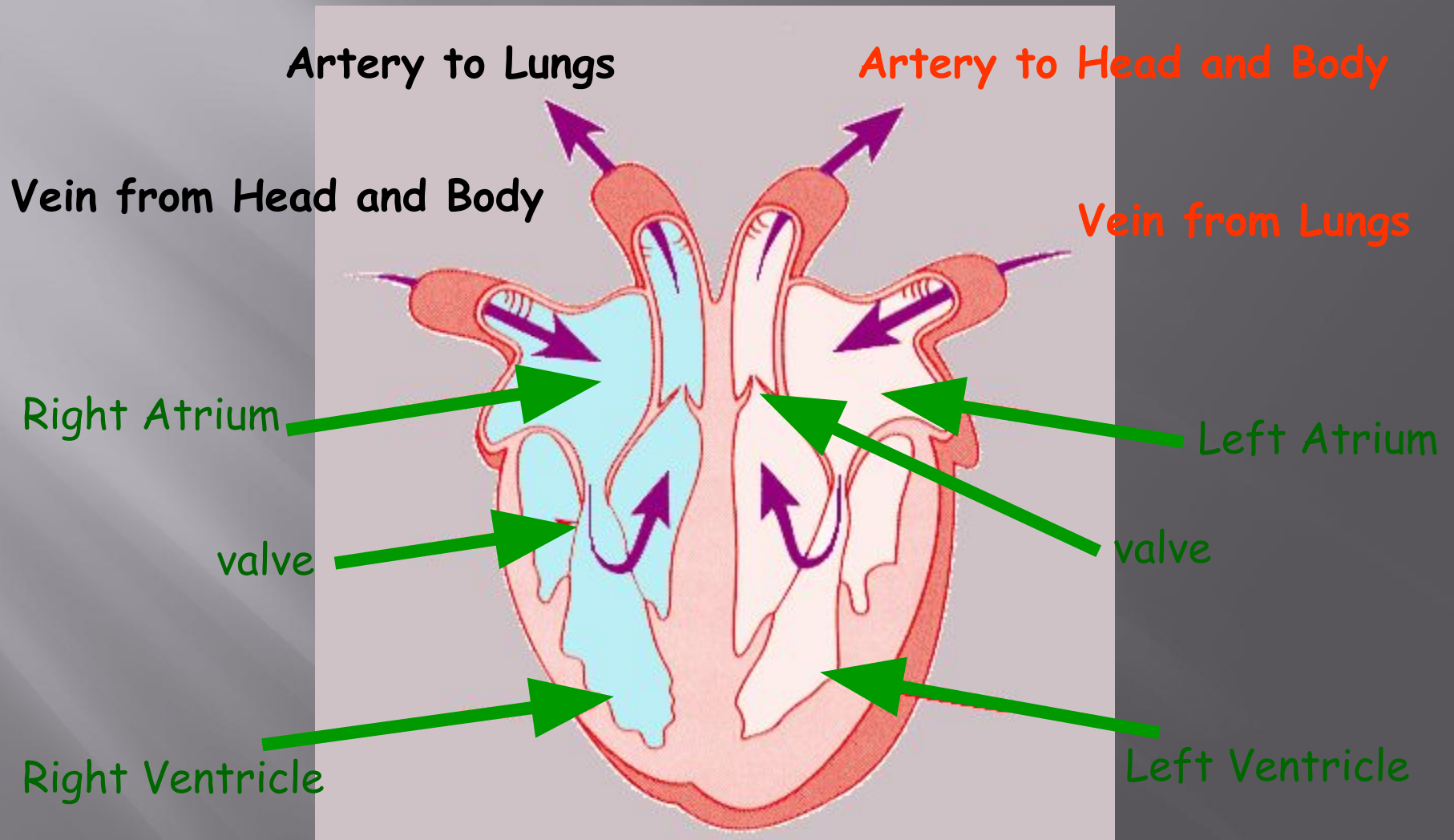


The heart has four chambers

now lets look inside the heart



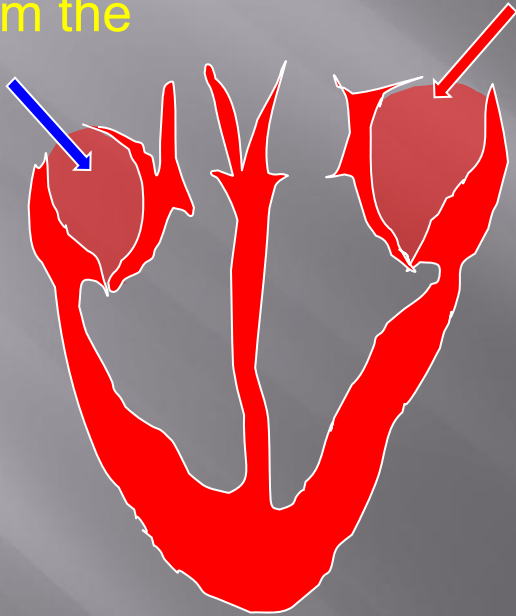
The Heart



How does the Heart work?

STEP ONE

blood from the
body



blood from
the lungs

The heart beat begins when the heart muscles relax and blood flows into the atria.

How does the Heart work?

STEP TWO

The atria then **contract** and the valves **open** to allow blood into the ventricles.



How does the Heart work?

STEP THREE



The valves **close** to stop blood flowing backwards.

The ventricles **contract** forcing the blood to leave the heart.

At the same time, the atria are **relaxing** and once again filling with blood.

The cycle then repeats itself.

blood from the heart gets around
the body through blood vessels

There are 3 types of blood vessels

- a. **ARTERY**
- b. **VEIN**
- c. **CAPILLARY**

what's in

digested food

red blood cells

white blood cells

oxygen

waste (urea)

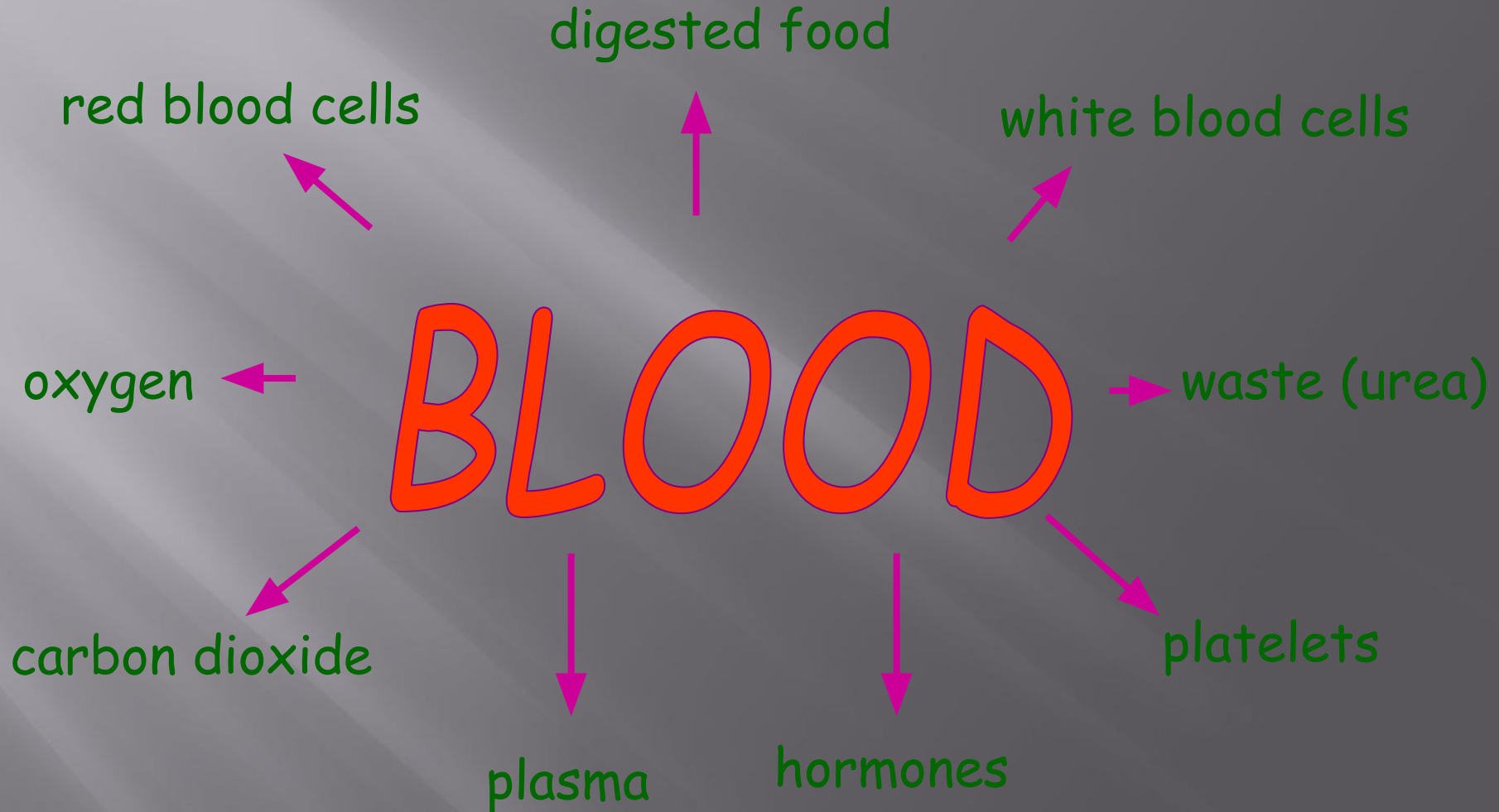
BLOOD

carbon dioxide

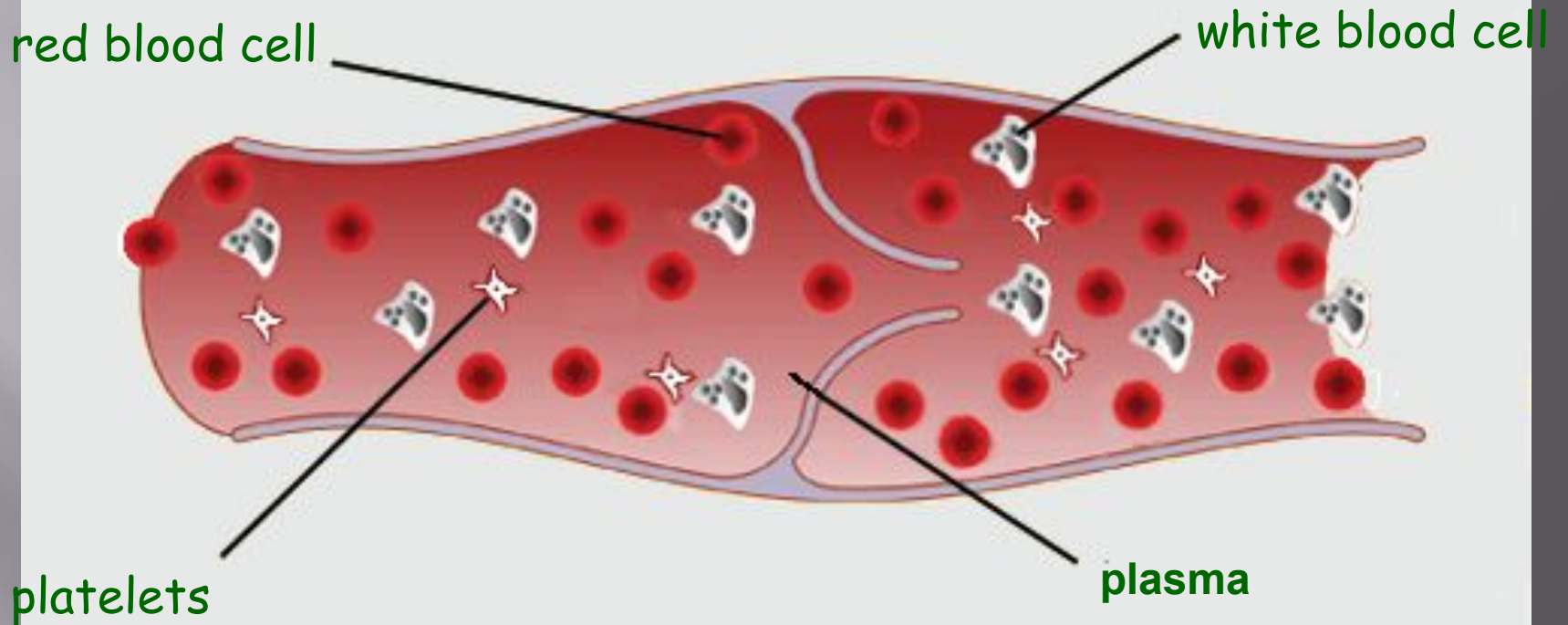
platelets

plasma

hormones



The Blood



Red Blood Cells

a biconcave disc that is round and flat **without a nucleus**

contain **haemoglobin**, a molecule specially designed to hold oxygen and carry it to cells that need it.



can **change shape** to an amazing extent, without breaking.

White Blood Cells



there are many different types and all contain a **big nucleus**.

the two main ones are the **lymphocytes** and the **macrophages**.

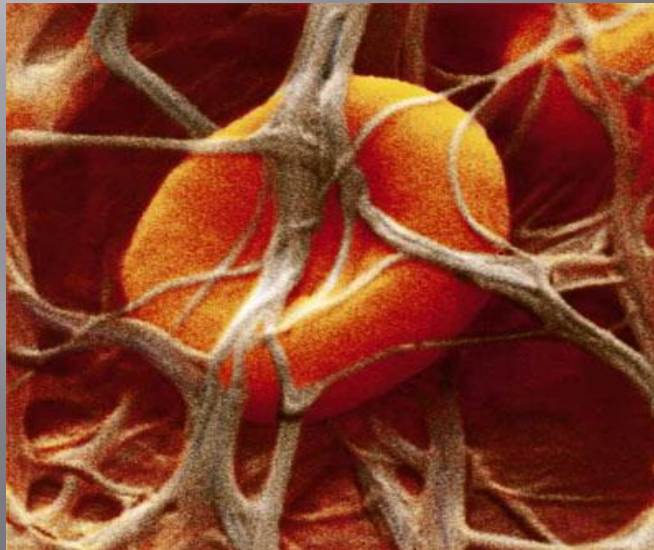
macrophages 'eat' and **digest** micro-organisms .

some **lymphocytes** fight disease by making **antibodies**.
other **lymphocytes** make **antitoxins** to break down poisons.

Platelets



Platelets are bits of cell broken off larger cells.



Platelets produce tiny **fibrinogen fibres** to form a net. This net traps other blood cells to form a **blood clot**.



Thank you for
attention !