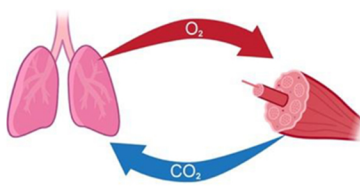
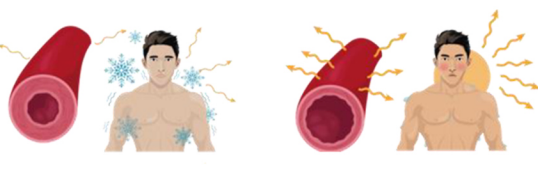
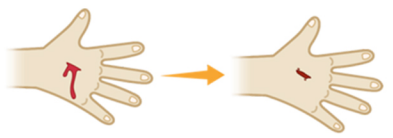


TOPIC: INTRODUCTION TO BLOOD

Functions of Blood

- ◆ **Blood:** red, viscous, specialized _____ connective tissue of the cardiovascular system.
 - ▶ Blood is slightly _____ (pH is 7.35-7.45).
 - ▶ Adults have 4-6 liters of blood, making up ~8% of total body mass.
 - ▶ Crucial in supporting life, as it carries out many functions, including these _____ essential functions:

1. Transport	2. Regulation	3. Protection
		
<ul style="list-style-type: none">◆ Delivers _____, nutrients, & hormones to body's cells.◆ Transports _____ (e.g. CO₂) to elimination sites.	<ul style="list-style-type: none">◆ Maintains body temperature.◆ Buffers maintain optimal _____ range.◆ Maintains volume in cardiovascular system.	<ul style="list-style-type: none">◆ Prevents blood _____.◆ Prevents infection.

EXAMPLE

Which of the following functions is NOT primarily associated with blood?

- a) Transport of hormones from endocrine glands to target organs.
- b) Regulation of pH balance by buffering acidic and alkaline substances.
- c) Production of digestive enzymes for breaking down food in the stomach.
- d) Removal of metabolic waste products such as carbon dioxide and urea.

TOPIC: INTRODUCTION TO BLOOD

Composition of Blood

◆ Blood can be separated into ____ components:

1. **Erythrocytes (Red Blood Cells, RBCs):** main cell type in blood adapted for ____ & CO₂ transport.

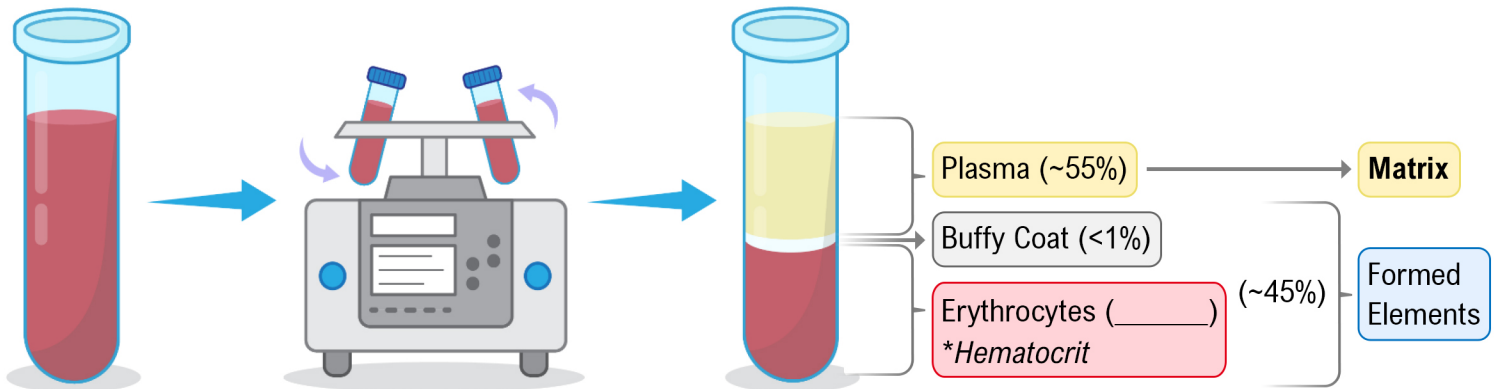
▶ *Hematocrit*: the ____ of total blood volume composed of RBCs (range: 36-50).

2. **Buffy Coat:** consists of: White Blood Cells (provide _____) & Platelets (blood clotting).

3. **Plasma:** 90% H₂O, electrolytes (Na⁺, Cl⁻, etc.), & various proteins (albumin, globulins, fibrinogen).

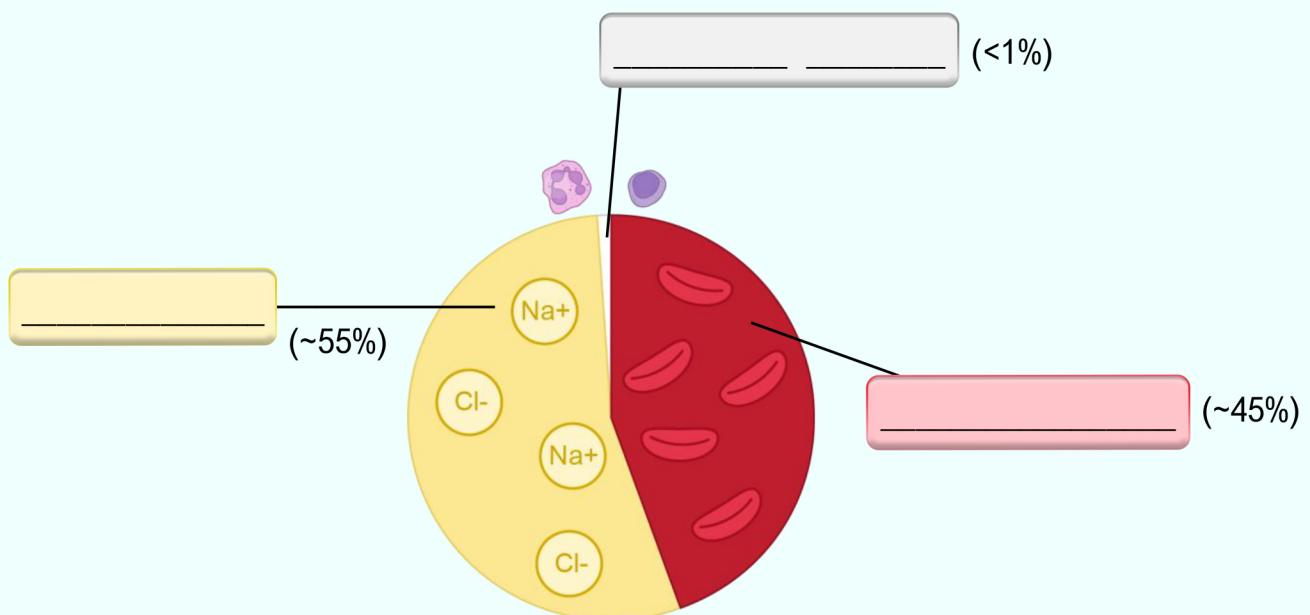
Formed Elements
(Living cells)

Matrix
(____ - living)



EXAMPLE

Label the pie chart representing the components of blood.



TOPIC: INTRODUCTION TO BLOOD

PRACTICE

Plasma accounts for ____% of all blood, and water accounts for ____% of plasma.

- | | |
|-----------|-----------|
| a) 55; 90 | c) 45; 55 |
| b) 90; 55 | d) 55; 45 |

PRACTICE

The most numerous **formed element** in blood are the _____, and their function is _____.

- a) Platelets; to prevent bleeding from open wounds.
- b) White blood cells; to carry oxygen.
- c) White blood cells; to fight infection.
- d) Erythrocytes; to carry oxygen and CO₂.