

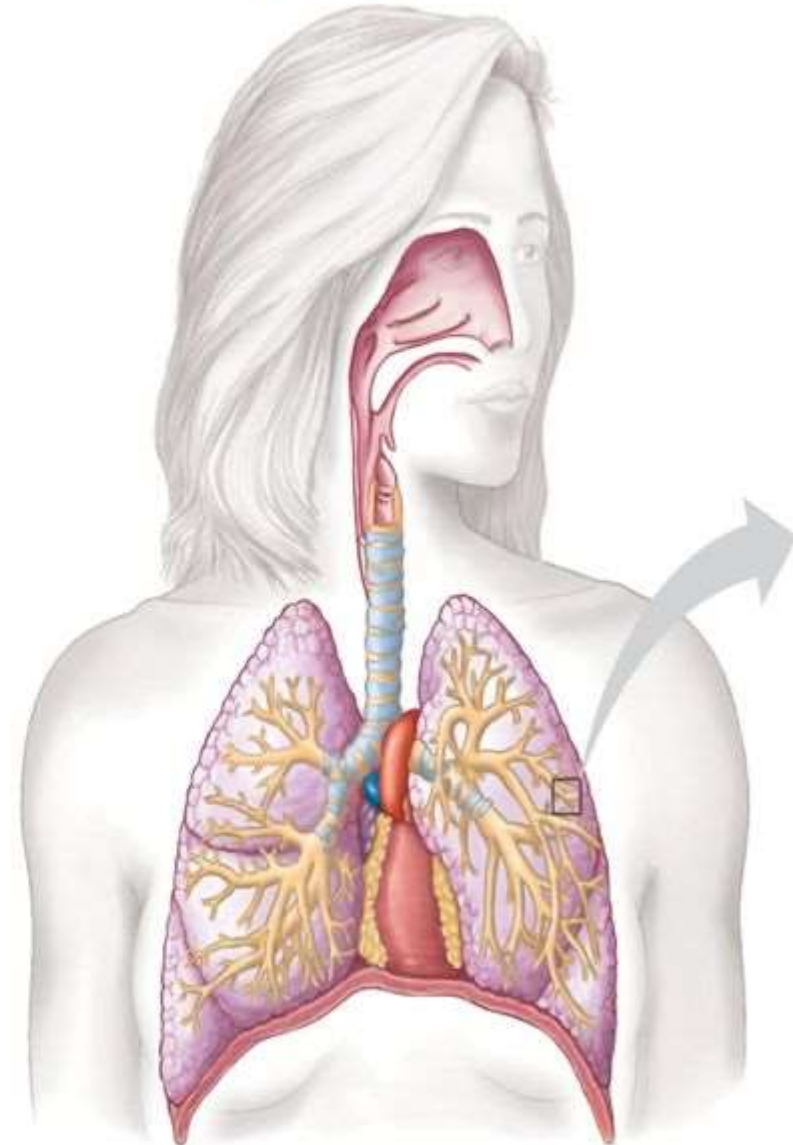
Body System Overview

Body systems are made of organs

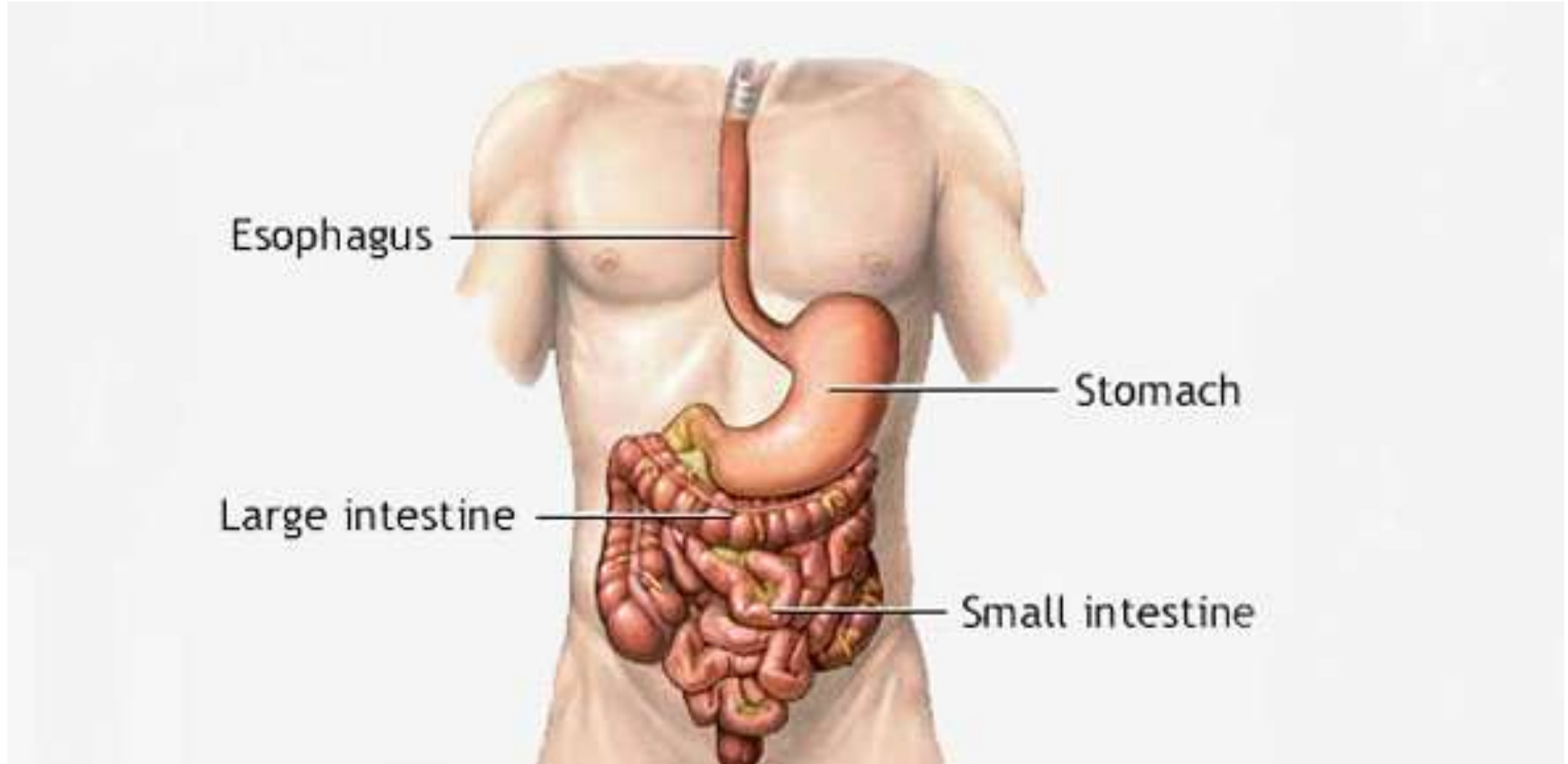
- For each system list as many organs as you can

Organs of the Respiratory system

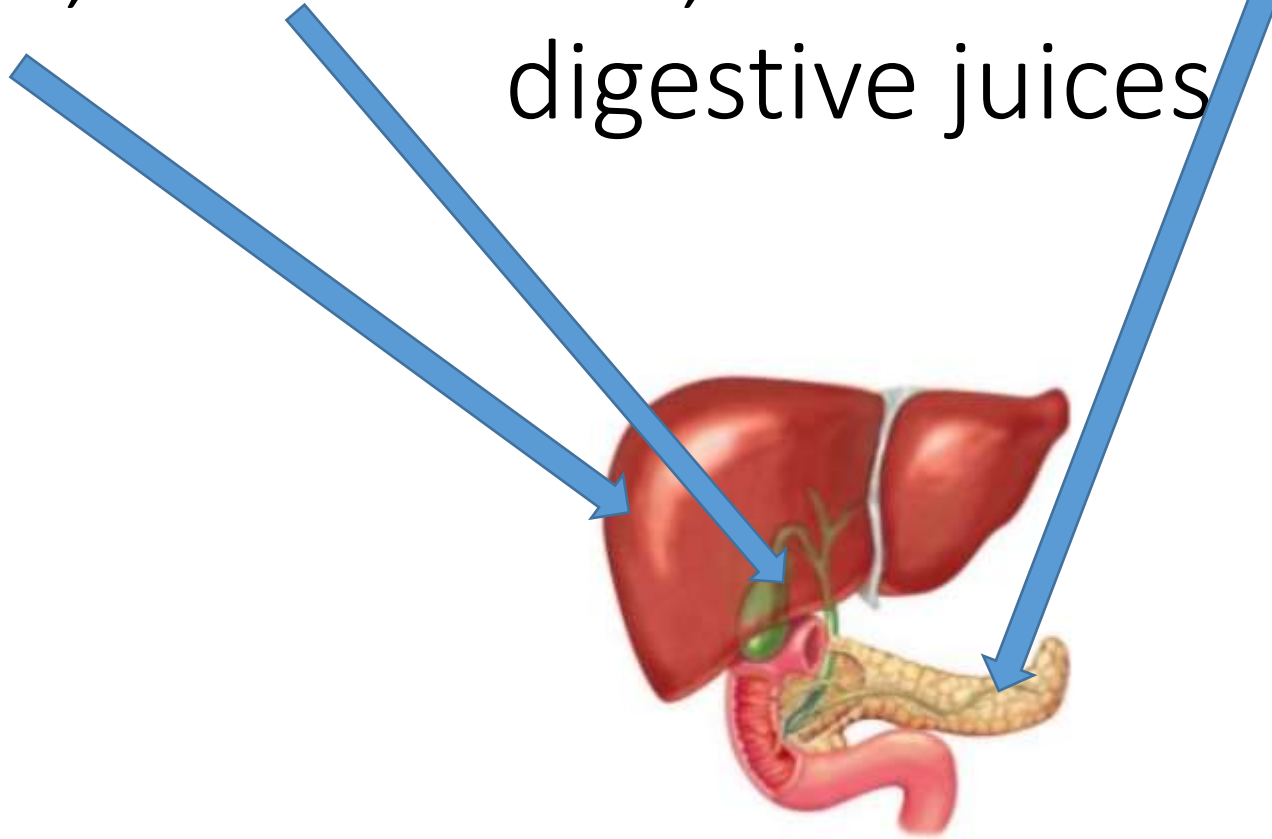
- Nose
 - Pharynx
 - Larynx
 - Trachea
 - Bronchi
 - Lungs – alveoli
- Conducting pathways
- Gas exchange



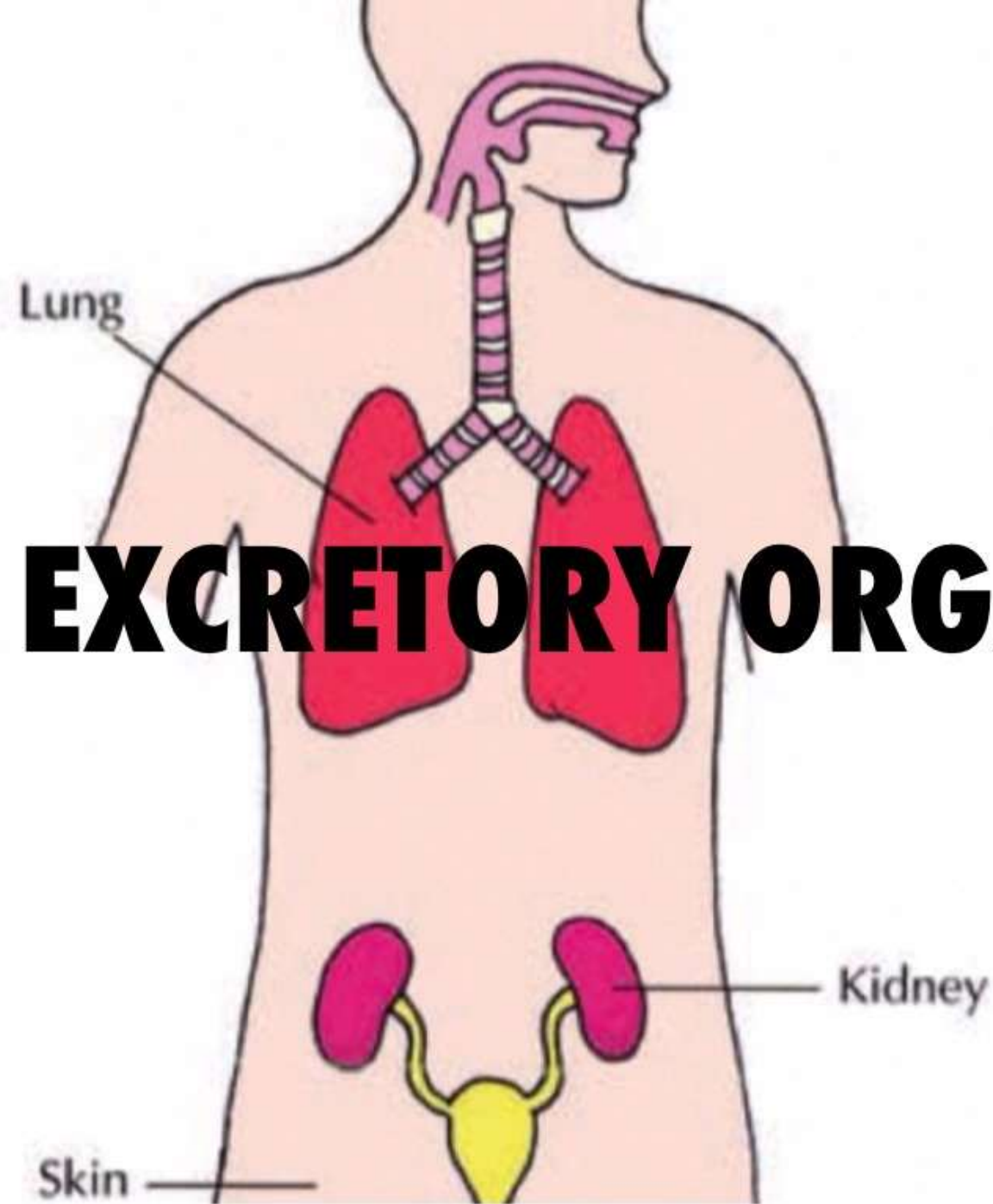
Organs of the Digestive System



Liver, Gall Bladder, and Pancreas all secrete
digestive juices

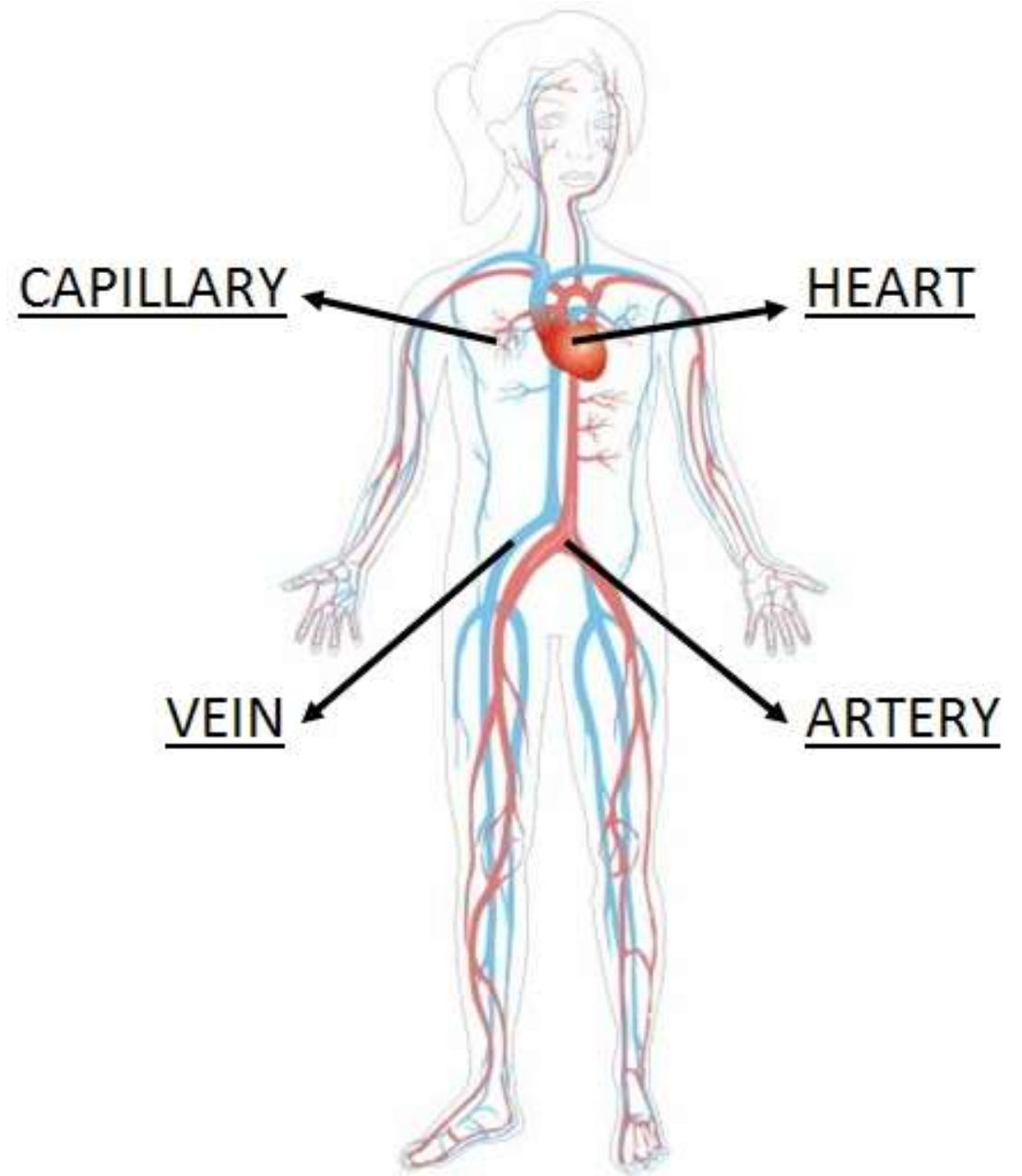


THE EXCRETORY ORGANS



Circulatory organs

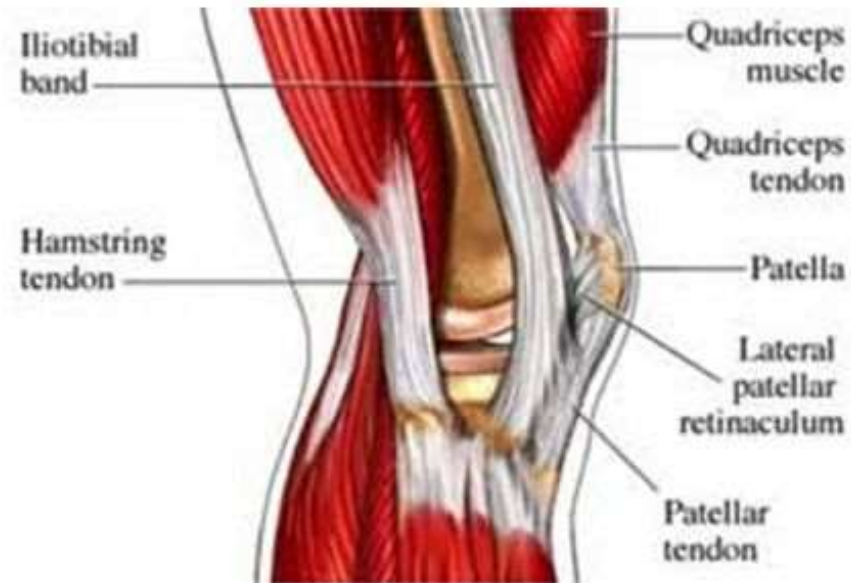
Blood



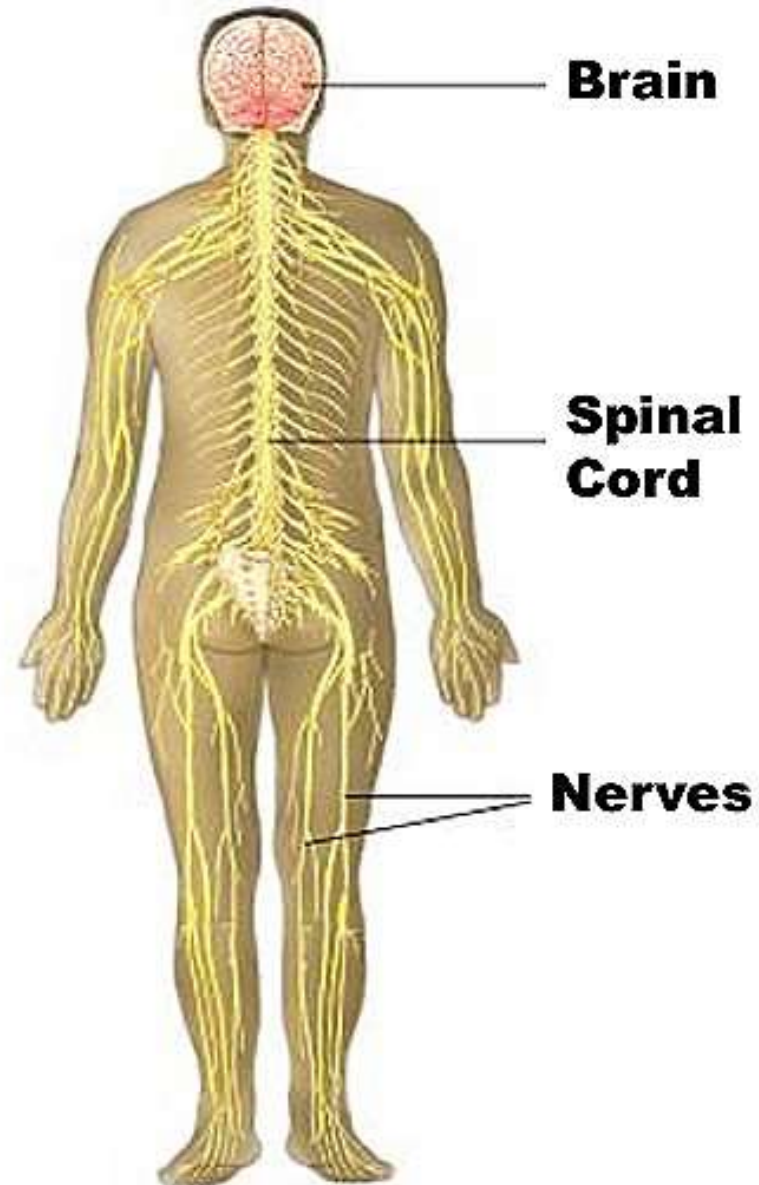
Skeletal / Muscular System

Organs

- Tendons
- Ligaments
- Skeletal muscles
- Smooth muscles
- Cardiac muscles

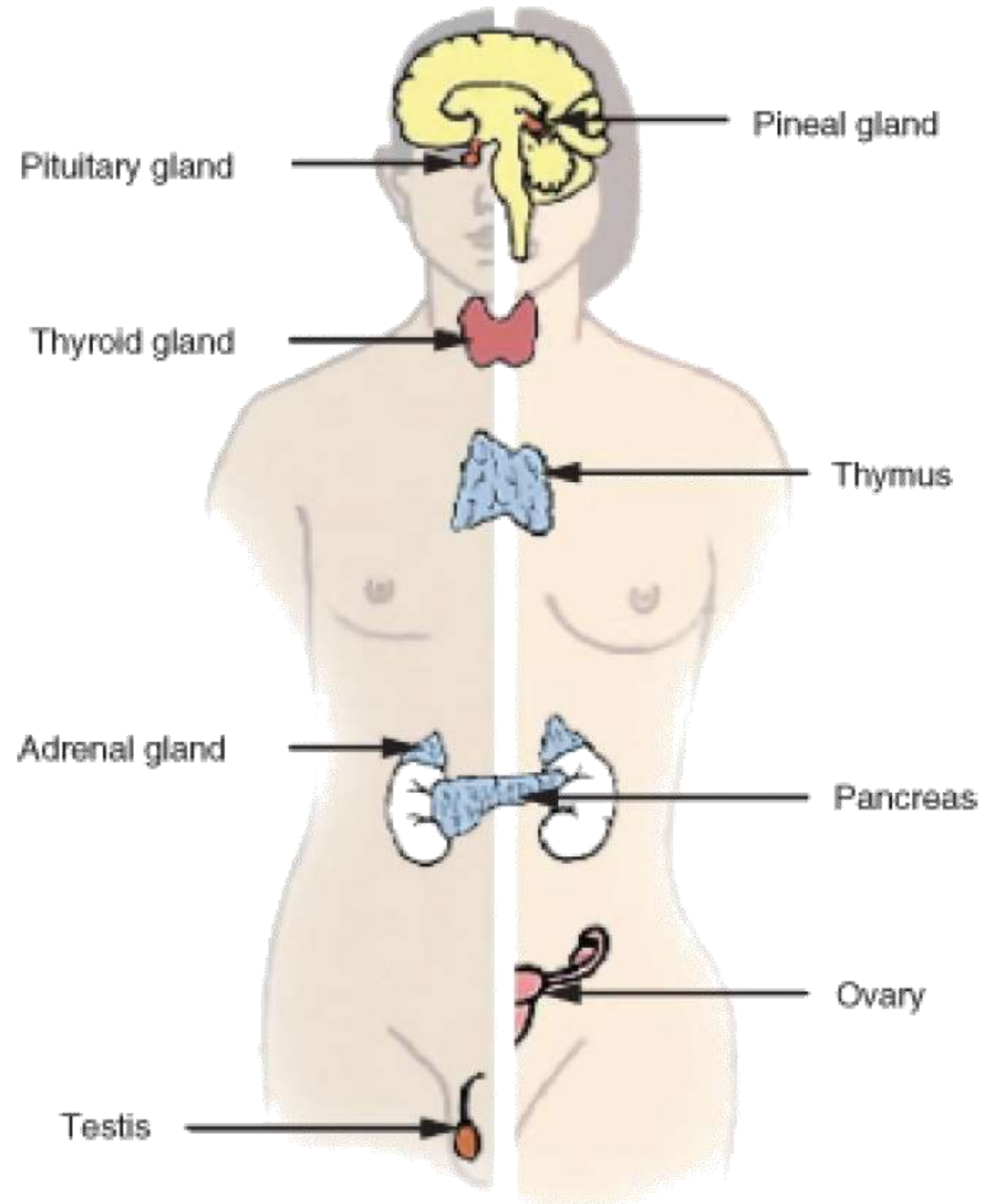


The Nervous System



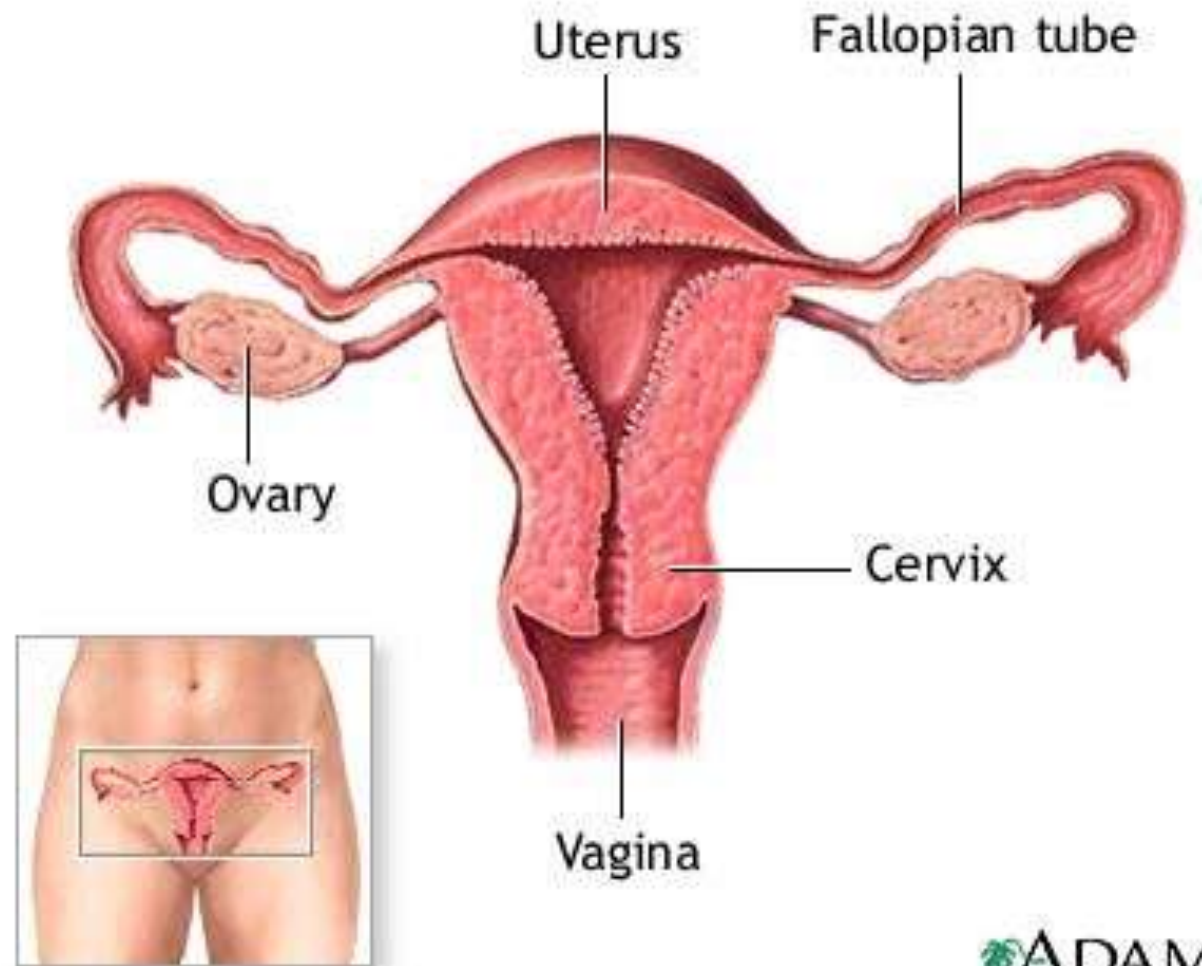
Endocrine System

- Pituitary gland
- Thyroid gland
- Thymus
- Adrenal gland
- Pancreas
- Ovaries (in females)
- Testes (in males)



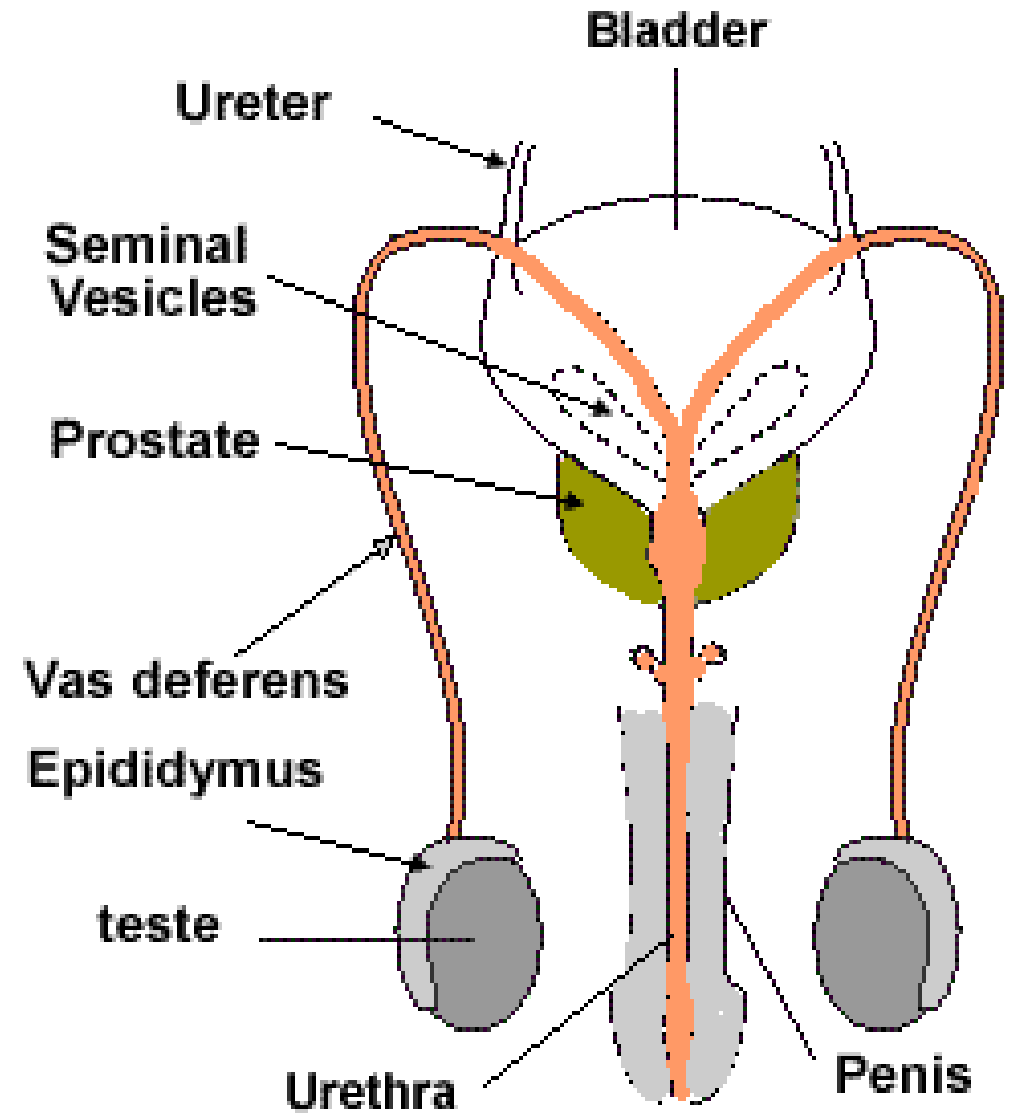
Female Reproductive system

- Ovaries
- Uterus
- Fallopian tube (oviduct)
- Vagina

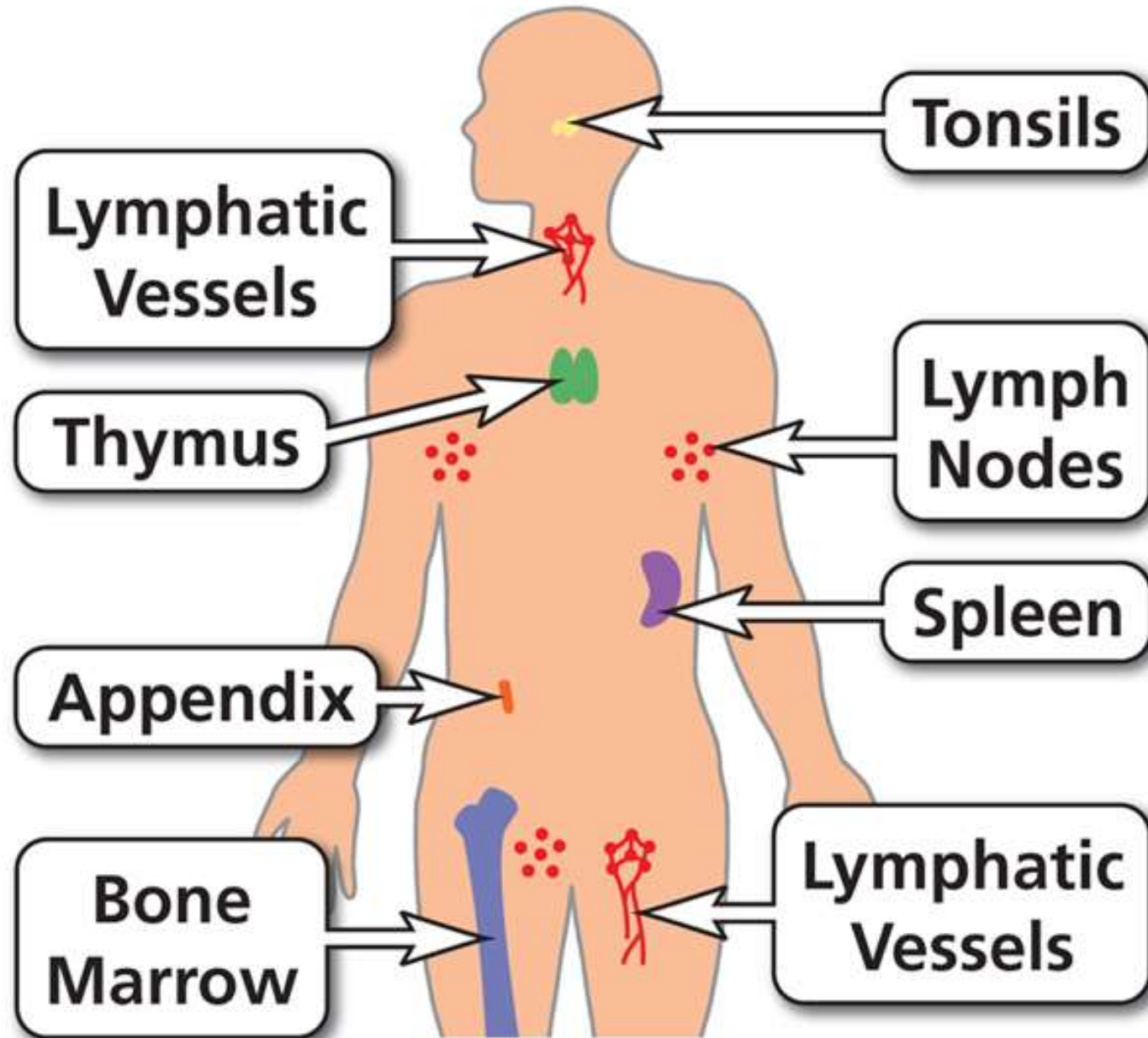


Male Reproductive system

- Testes
- Prostate
- Urethra



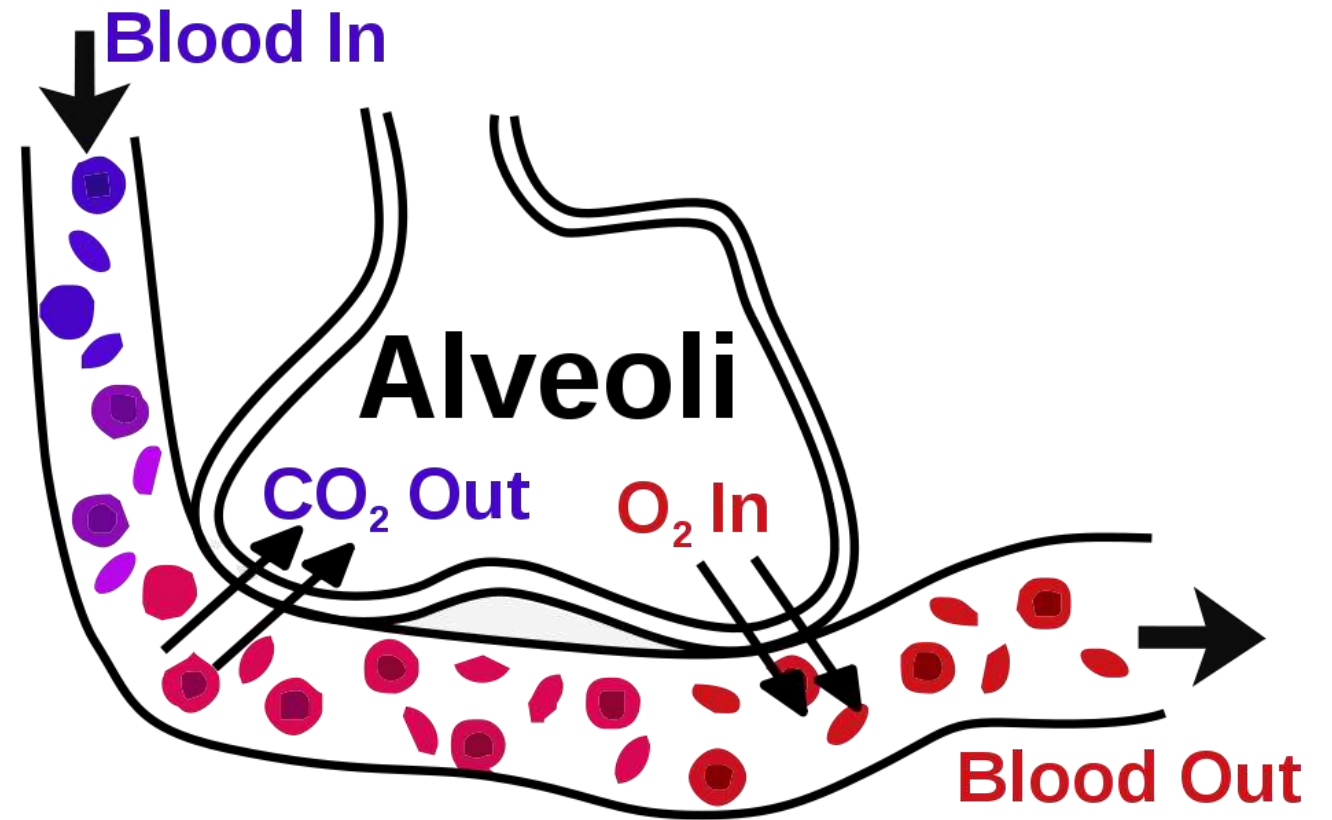
Immune System



Each system has a specific function

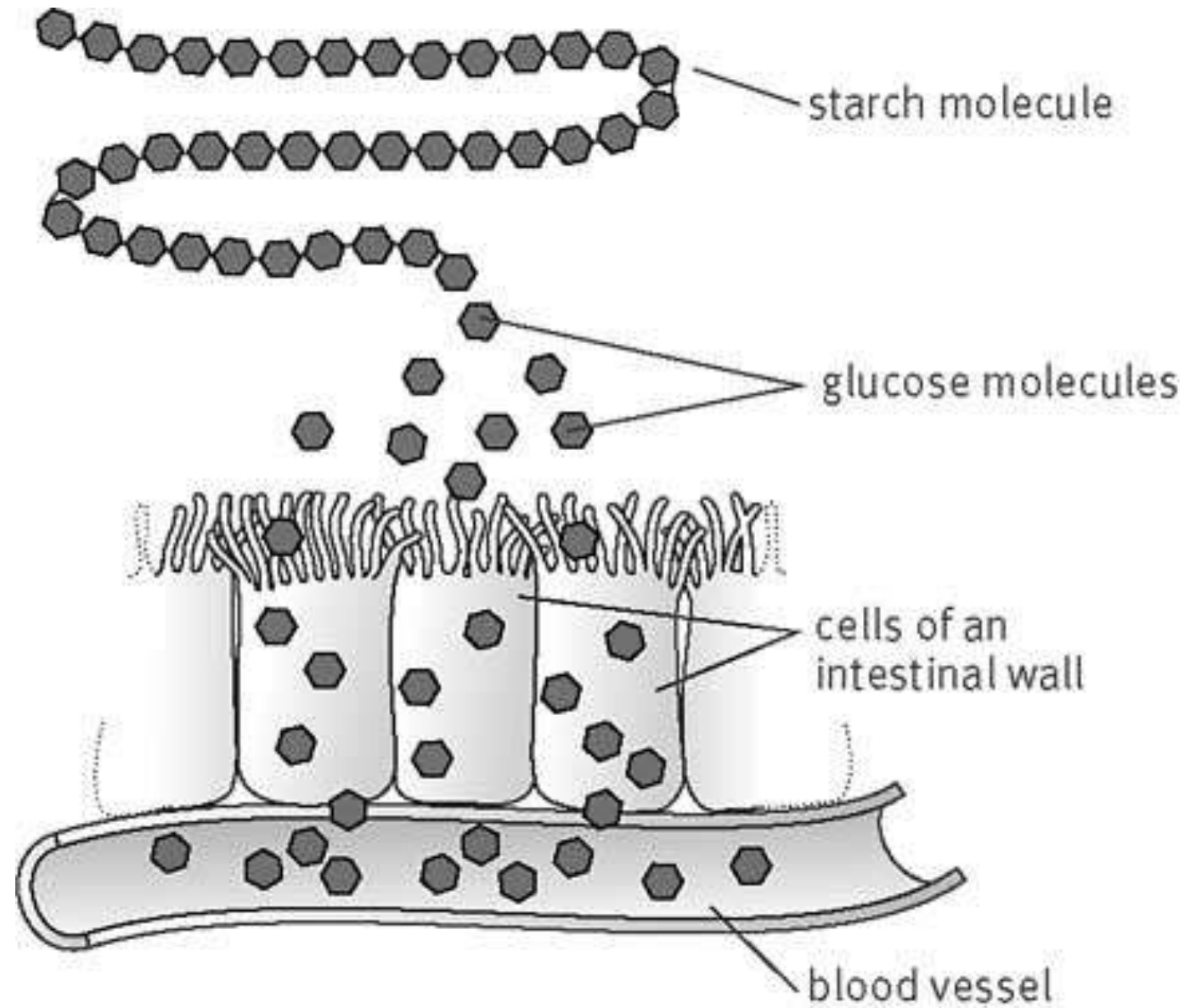
Respiratory system

- Gas exchange
- Supply O_2
- Remove CO_2



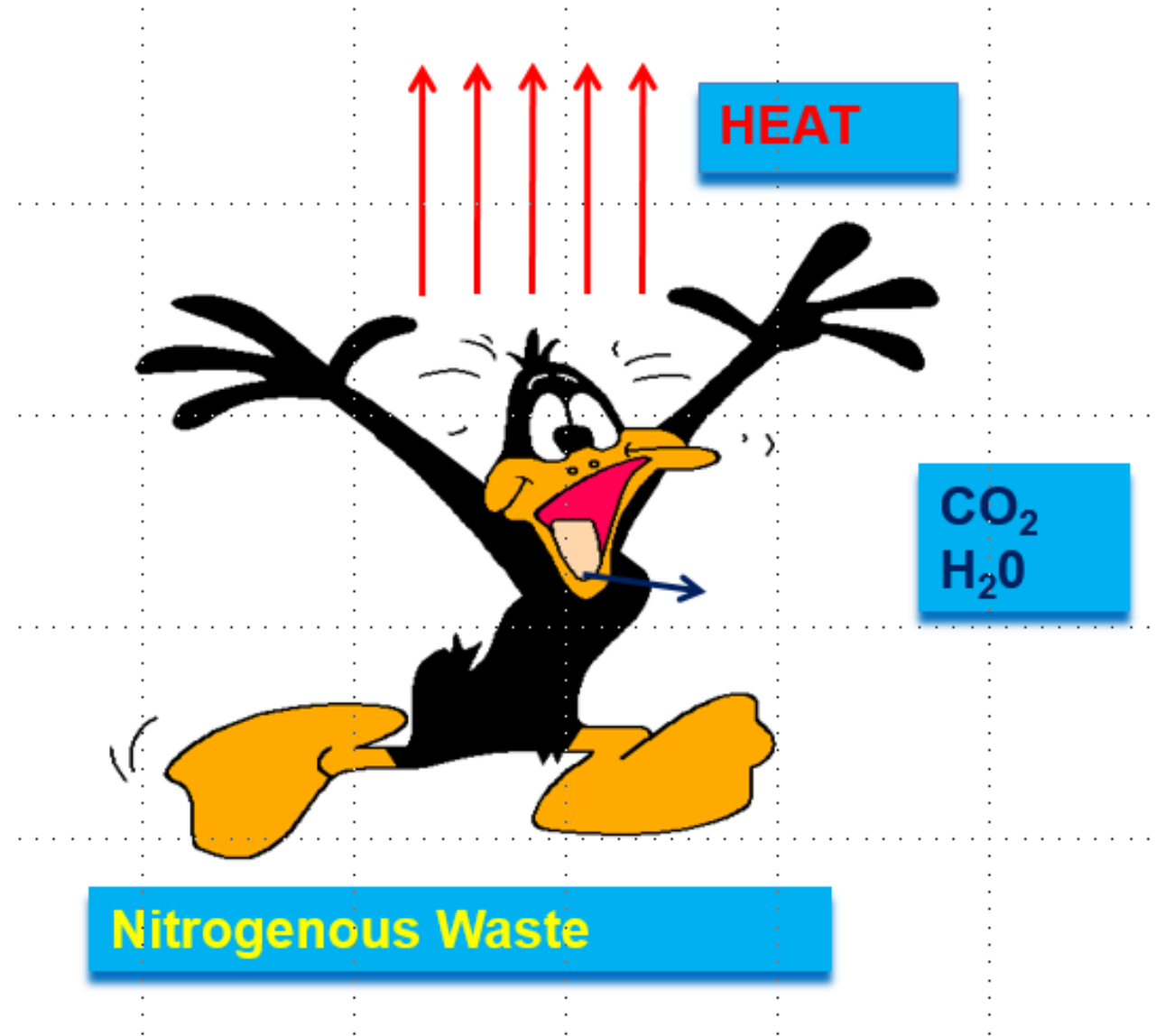
Digestive system

- Mechanical and chemical digestion of food
- Absorption of nutrients



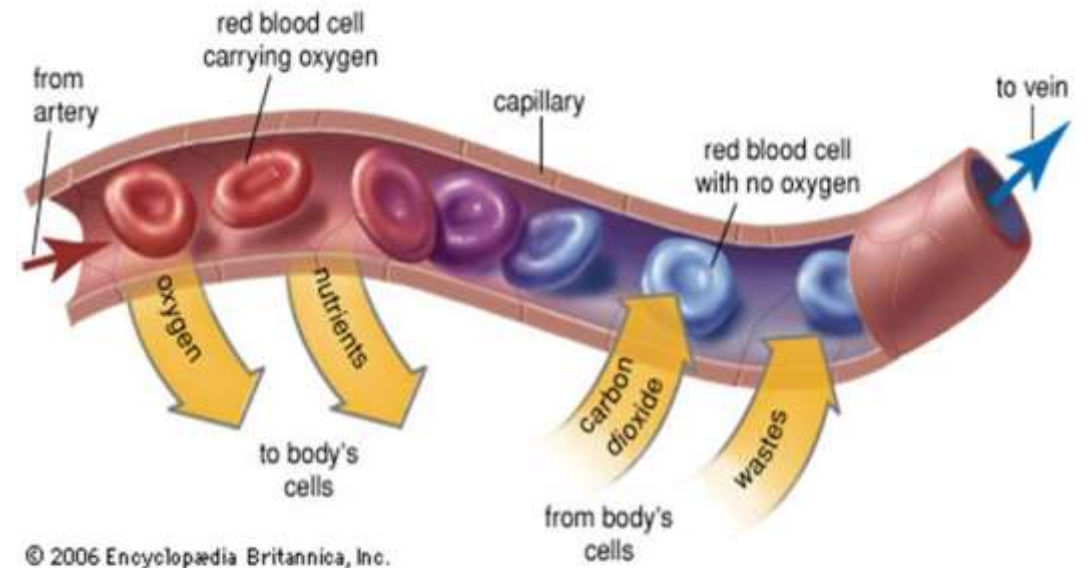
Excretory System

- Removal of dissolved wastes
 - Liquids
 - Gases
 - Heat



Circulatory System

- Move substances to and from cells
- Transport
 - Gases
 - Nutrients and
 - Wastes



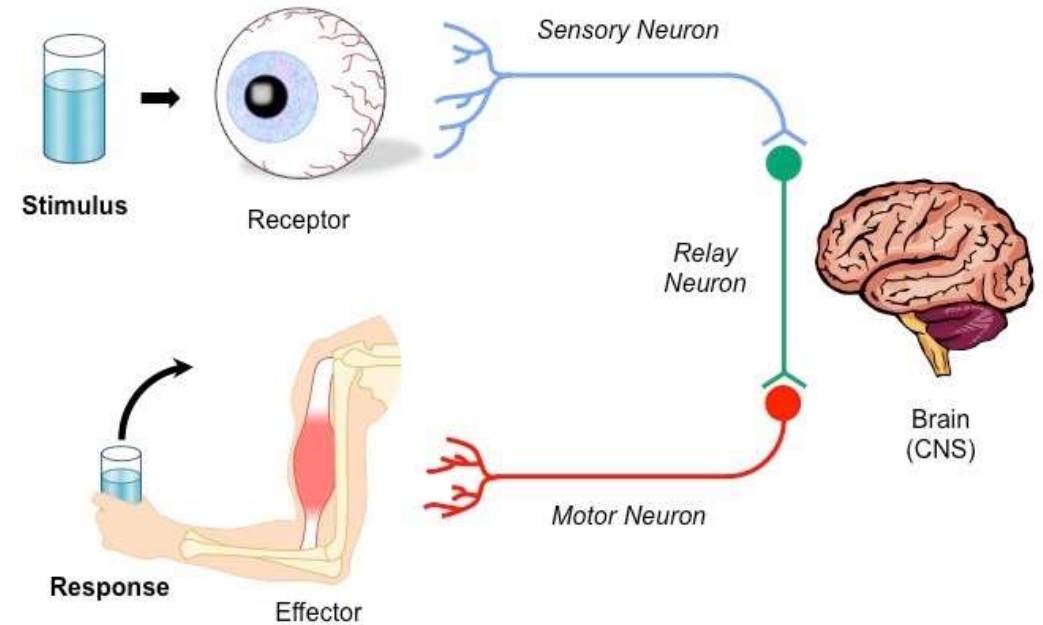
Skeletal / Muscle Systems

- Locomotion
- Escape danger
- Obtain food and shelter



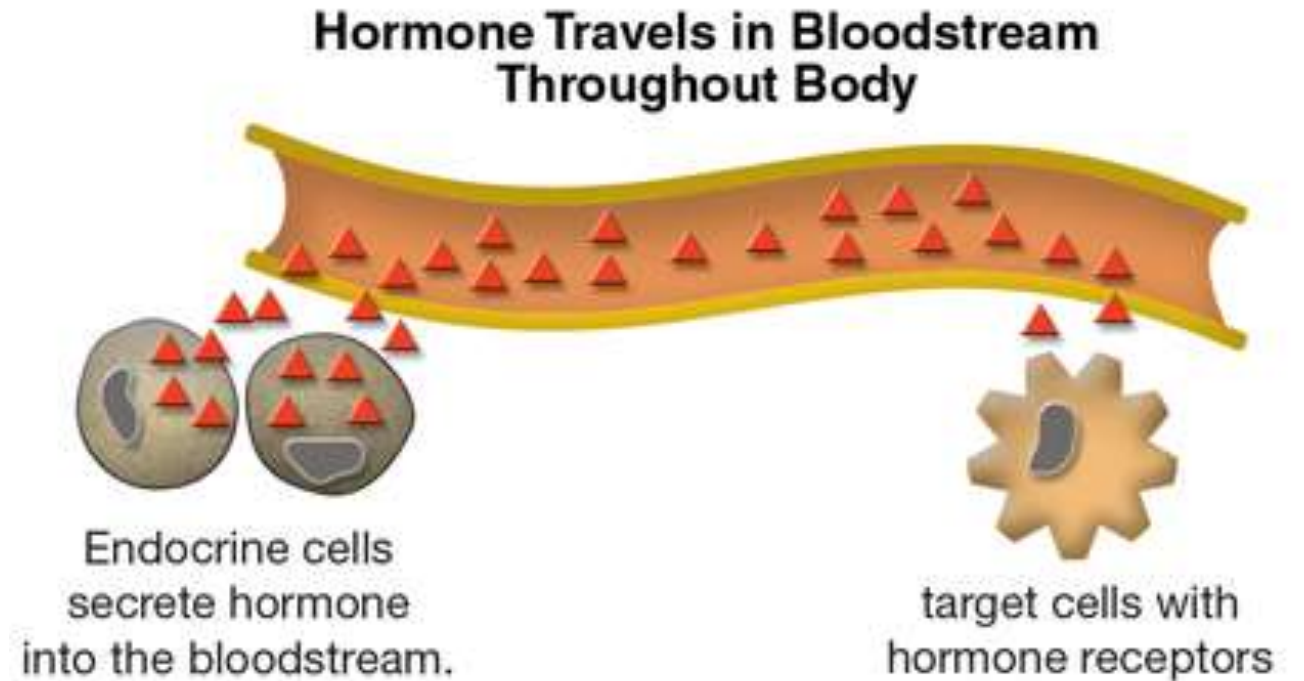
Nervous System

- Control and Coordinate body
- Receive and respond to stimuli
- Stimuli = things your senses detect (sight, sound...)
- Response = what your body does (move, sweat...)



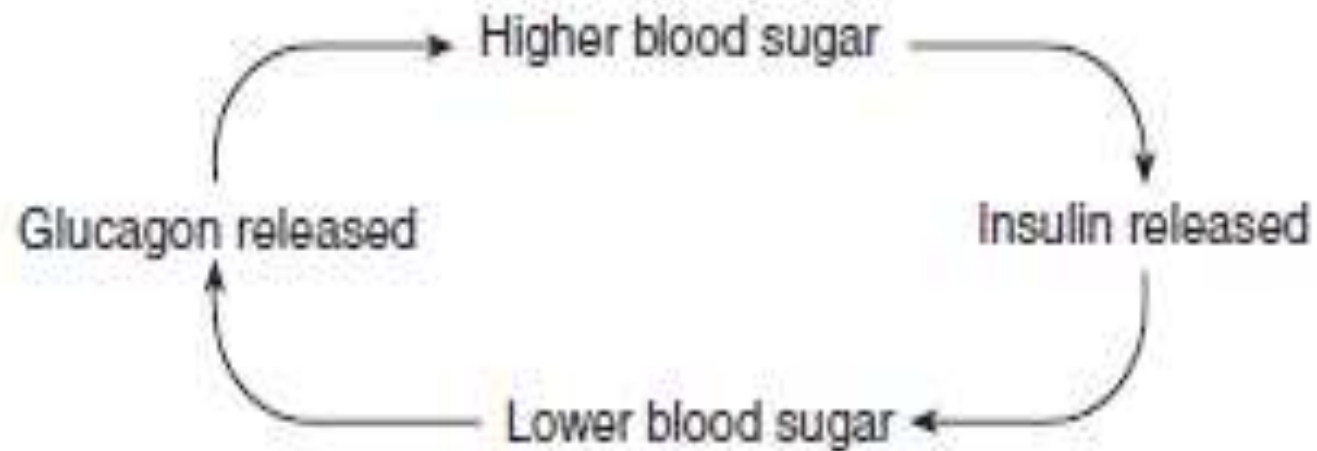
Endocrine system

- Control and coordinate
- Glands produce chemical messengers called hormones



Example

Hormones → maintain equilibrium



Reproductive systems

- Producing sex cells necessary for production of offspring

Immune system

- Prevent disease
- Repair damaged cells

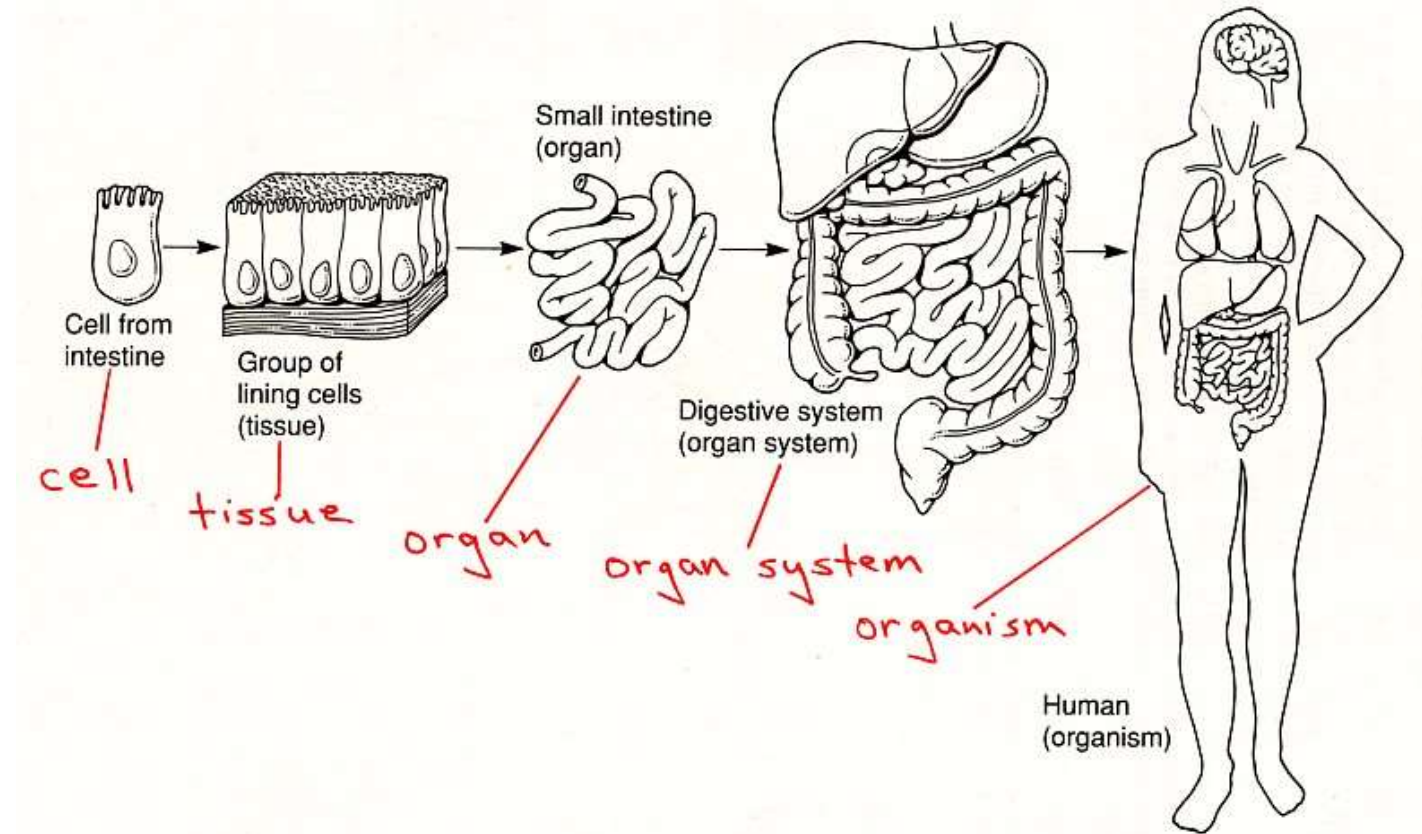


Immune system fights infectious disease

- Infectious diseases are caused by microorganisms
- Ex:
 - Flu caused by virus
 - Pneumonia caused by bacteria
 - Food poisoning caused by pathogen

Organize from smallest to biggest

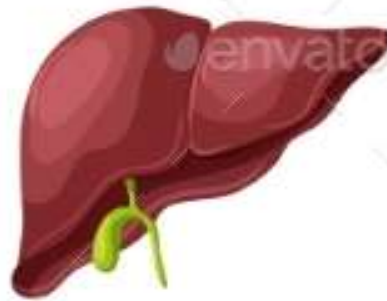
- Organelles
- Cells
- Tissues
- Organs
- Organ systems



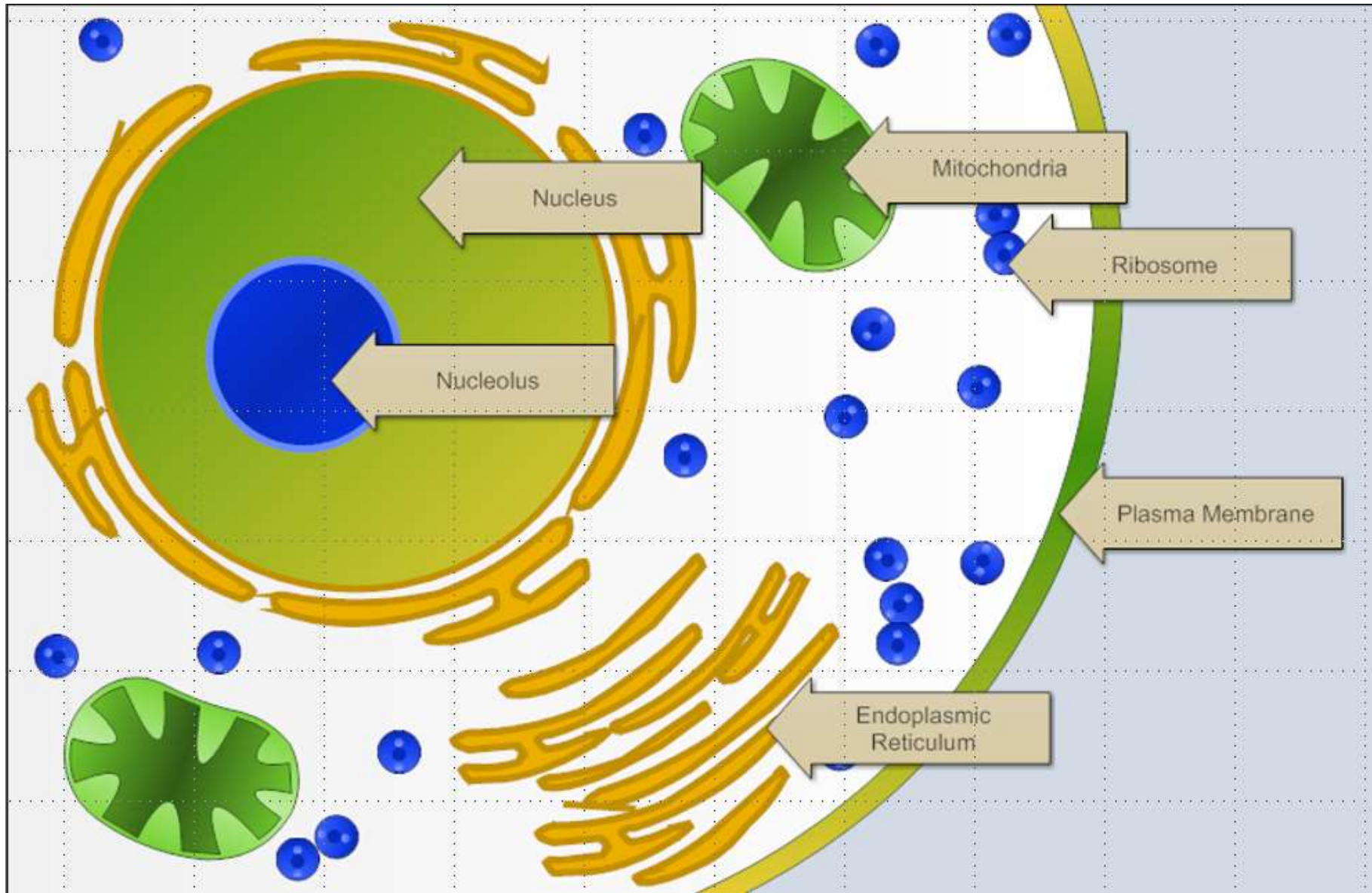
Cells



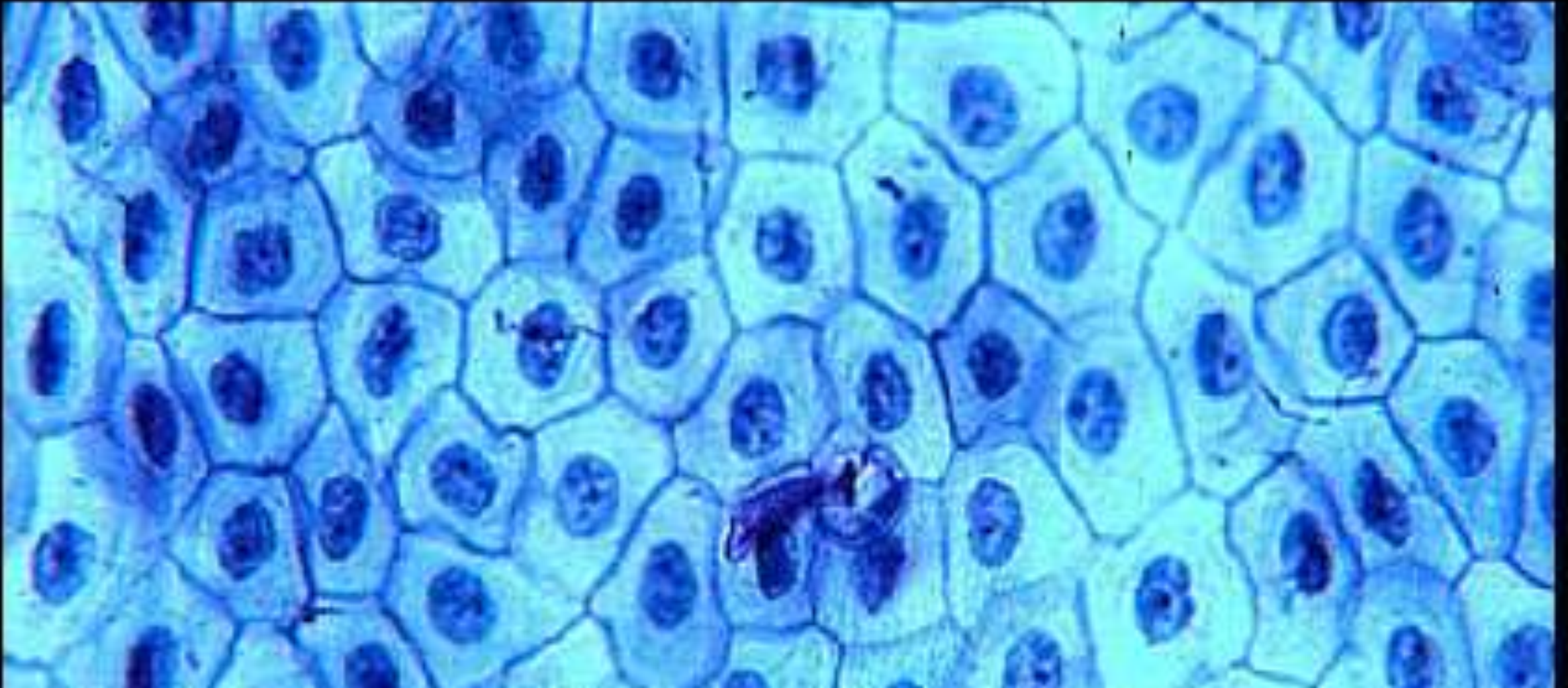
Organs



Organelles



Tissue



What are cell organelles made up of?

- Molecules
- Compounds
- Atoms

Body systems work together to maintain homeostasis

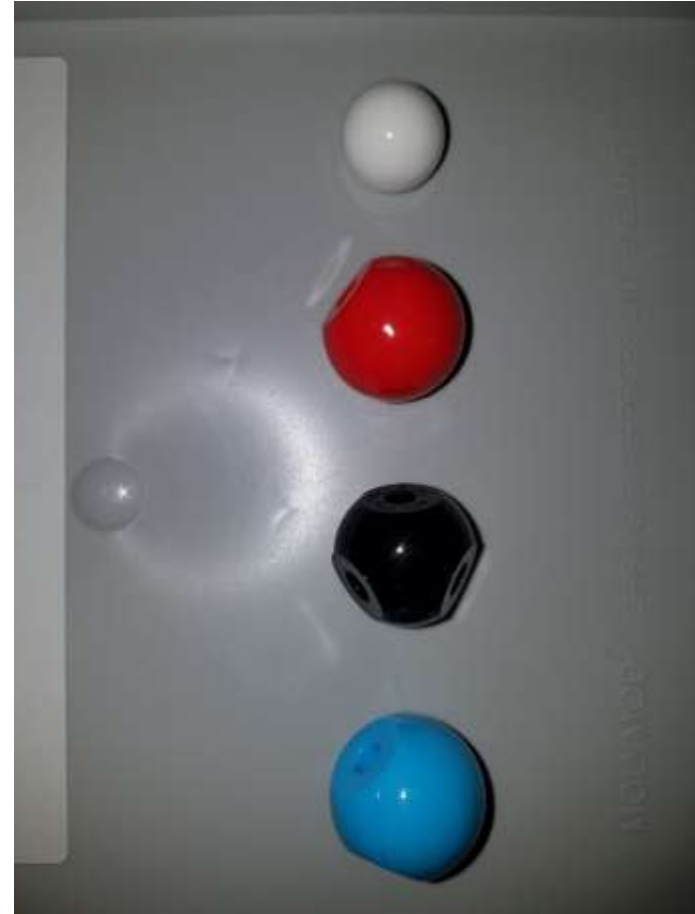
- Give an example of 2 body systems working together to get rid of wastes
 - Circulatory system carries CO₂ to lungs
 - Respiratory system removes CO₂ from body
- Give an example of 2 body systems working together to get nutrients to cells
 - Digestive system breaks down food so that it can be absorbed into
 - Circulatory system carries nutrients to cells
 - Digestive system → circulatory system → body cells

Physical Science Review Activity

- Atoms
- Molecules
- Compounds
- Mixtures

Atoms

- Building blocks of matter
- Lots of different types
- Ex
 - Hydrogen (white)
 - Oxygen (red)
 - Carbon (black)
 - Nitrogen (blue)
- **Circle each of the atoms above on the periodic chart and write the symbol and number of protons in each**



Molecules

- Formed when 2 or more atoms bond together by sharing electrons
- Stable molecules do not have extra electrons

- **Activity**
- Each hole in the molecule represents an extra electron that wants to bind to another electron
- **Use the models to make stable molecules**
- **REMEMBER STABLE MOLECULES DO NOT HAVE EXTRA ELECTRONS**

Compounds

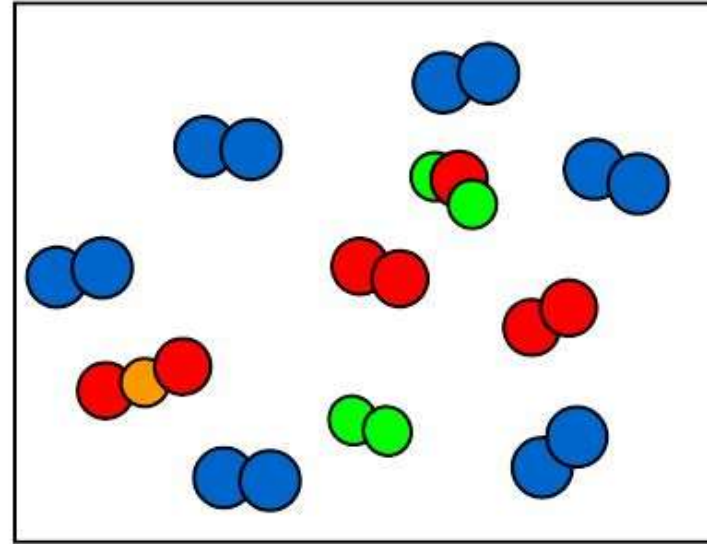
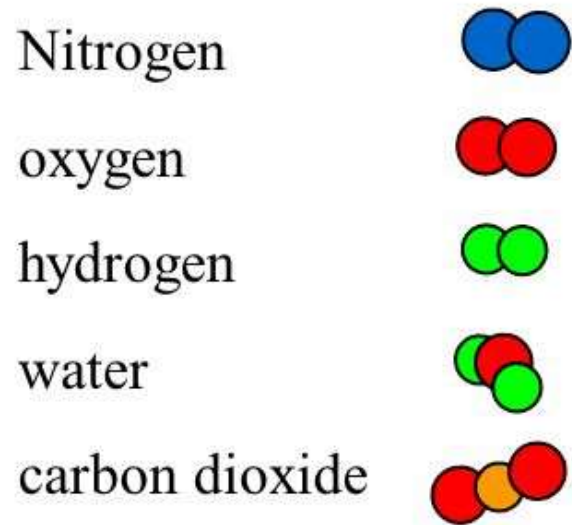
- Molecules made of more than one type of atom



Mixtures

- Combination of molecules that are not chemically bound to each other.
- Can be separated by
 - Filtering
 - Evaporating
- Draw a picture of a mixture in your notes

Air is a mixture of the pure substances like oxygen, nitrogen, carbon dioxide, water, etc.



So there are many sorts of molecules in air: the O_2 molecules, N_2 molecules, CO_2 molecules, H_2O molecules, etc.

NOVA Universe within Immune system