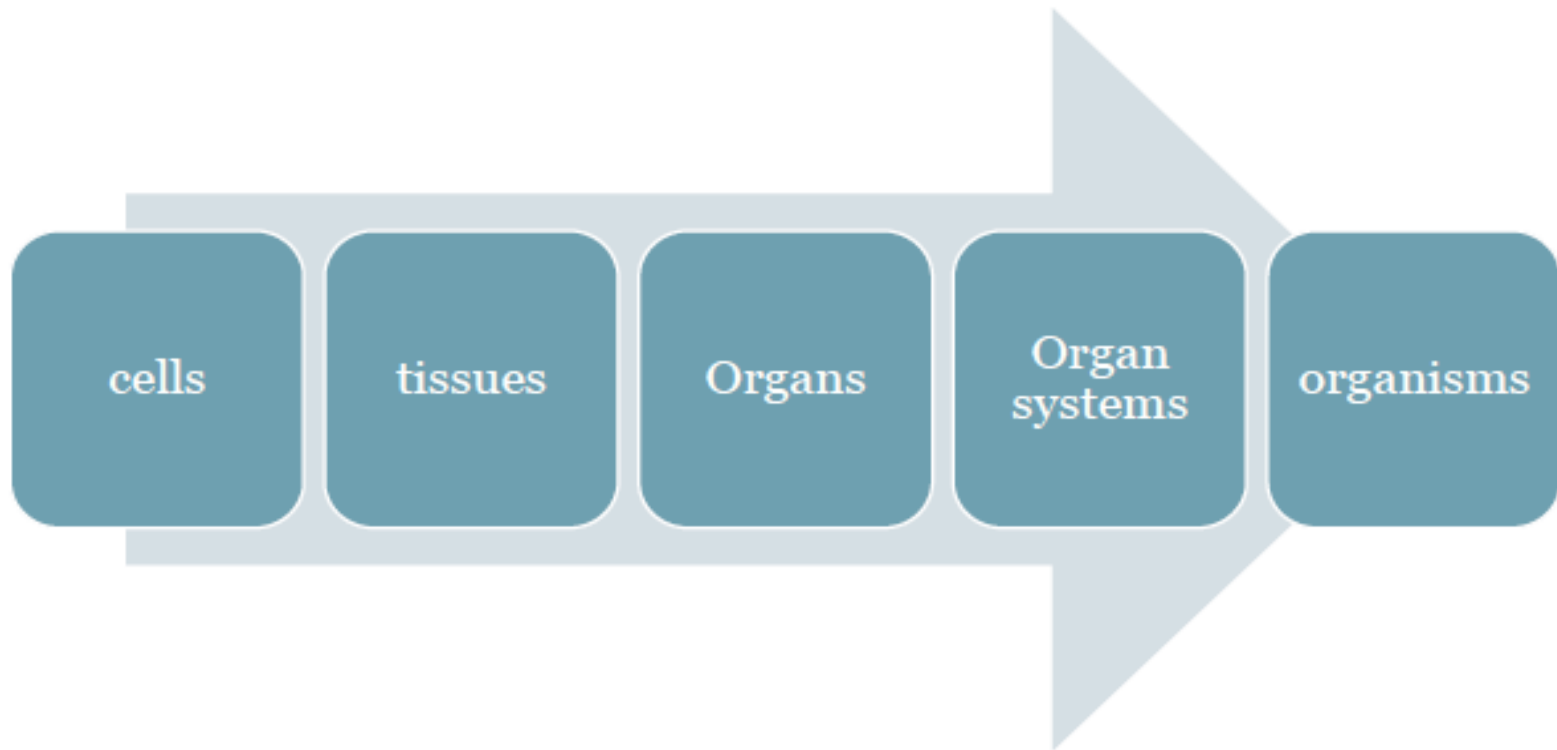


UNIT 4:“CELLS, TISSUES, ORGANS & SYSTEMS”

Chapter 11: “Tissues, Organs and
Systems.”

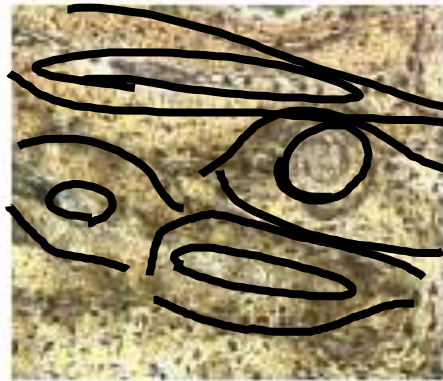
Levels of Organization



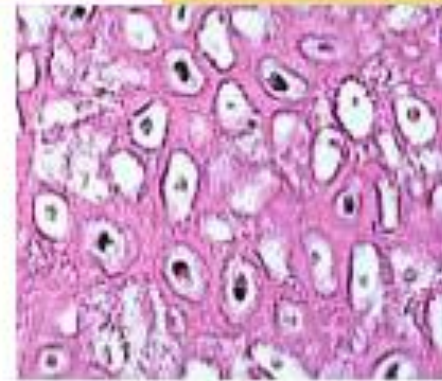
TISSUES

- Groups of similar cells
- Found in all multicellular organisms
- Ex. Muscle tissue, nerve tissue, epithelial tissue, etc.

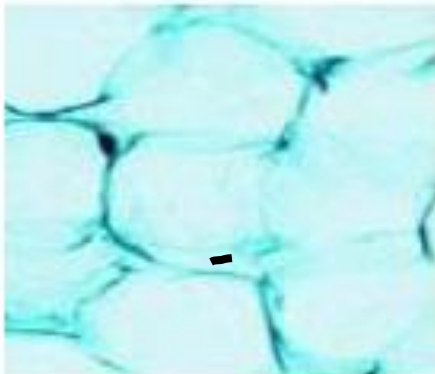
Histological images
of various tissues
in the body



Bone

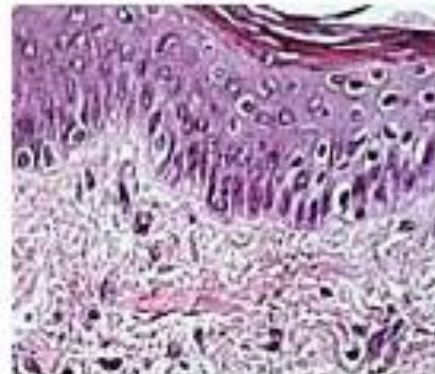


Cartilage

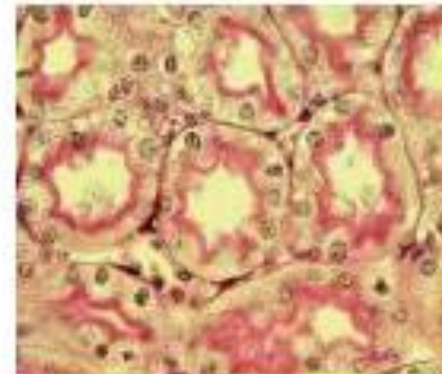


Adipose Tissue

Fat



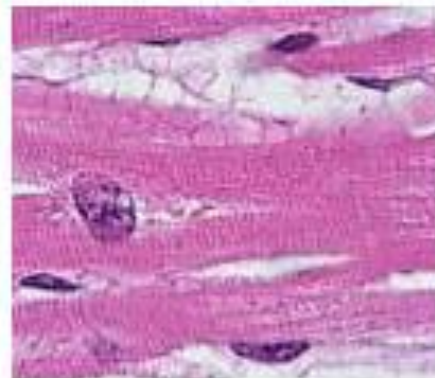
Skin



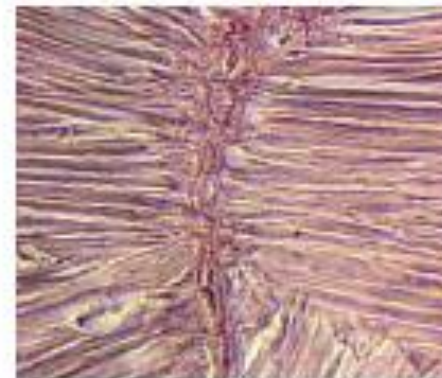
Intestinal Villi



Neural Tissue



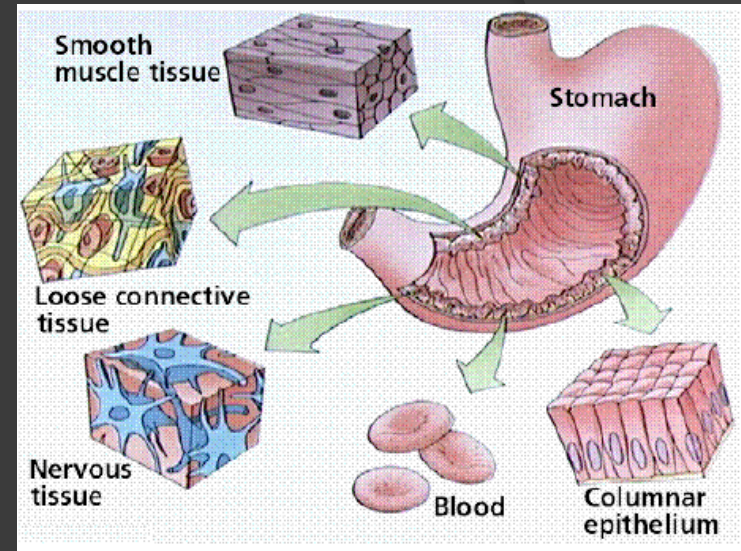
Cardiac Muscle



Skeletal Muscle

ORGANS

- Groups of tissues.
Made up of two or more types of tissues.



- They are distinct structures that perform specific functions.
- Ex. Lungs, kidneys, heart, etc.

SYSTEMS

- All systems have the following characteristics:
 1. Made up of individual parts that work together as a whole
 2. Often connected to one or more systems
 3. If one part of a system is missing or damaged, the system will not function well or may not function at all.

Questions in Textbook

● Read p. 420-423

● Page 425 #s 1, 3, 4, 7, 8

● Read p. 426-430

ORGAN SYSTEMS pg. 428-430

- A group of organs that perform activities that help the body as a whole.
- 6 examples of organ systems are...
 1. Digestive System
 2. Circulatory System
 3. Nervous System
 4. Respiratory System
 5. Excretory System
 6. Muscular System

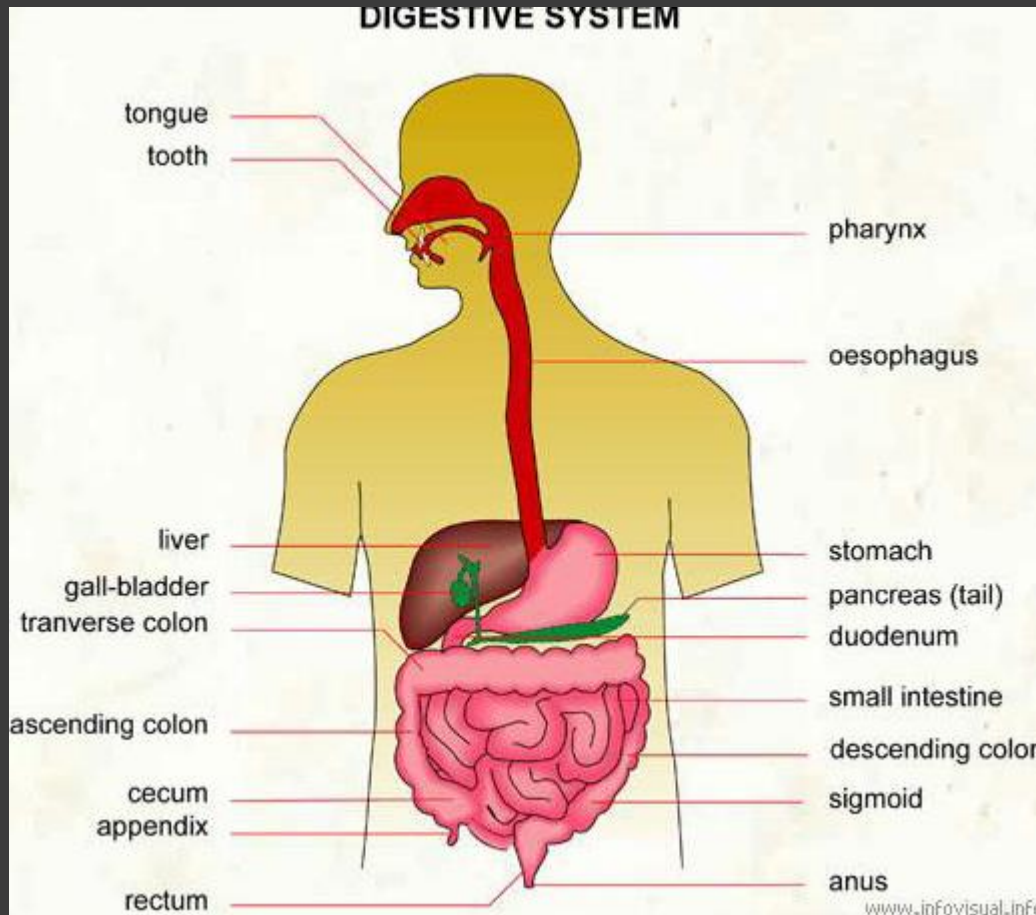
DIGESTIVE SYSTEM

Consists of:

- Mouth
- Gall Bladder
- Small Intestine
- Liver
- Stomach
- Large Intestine
- Oesophagus
- Pancreas

Function:

- To take in and break down food, absorb nutrients, and eliminate solid waste.



[Magic school
Video Clip](#)

CIRCULATORY SYSTEM

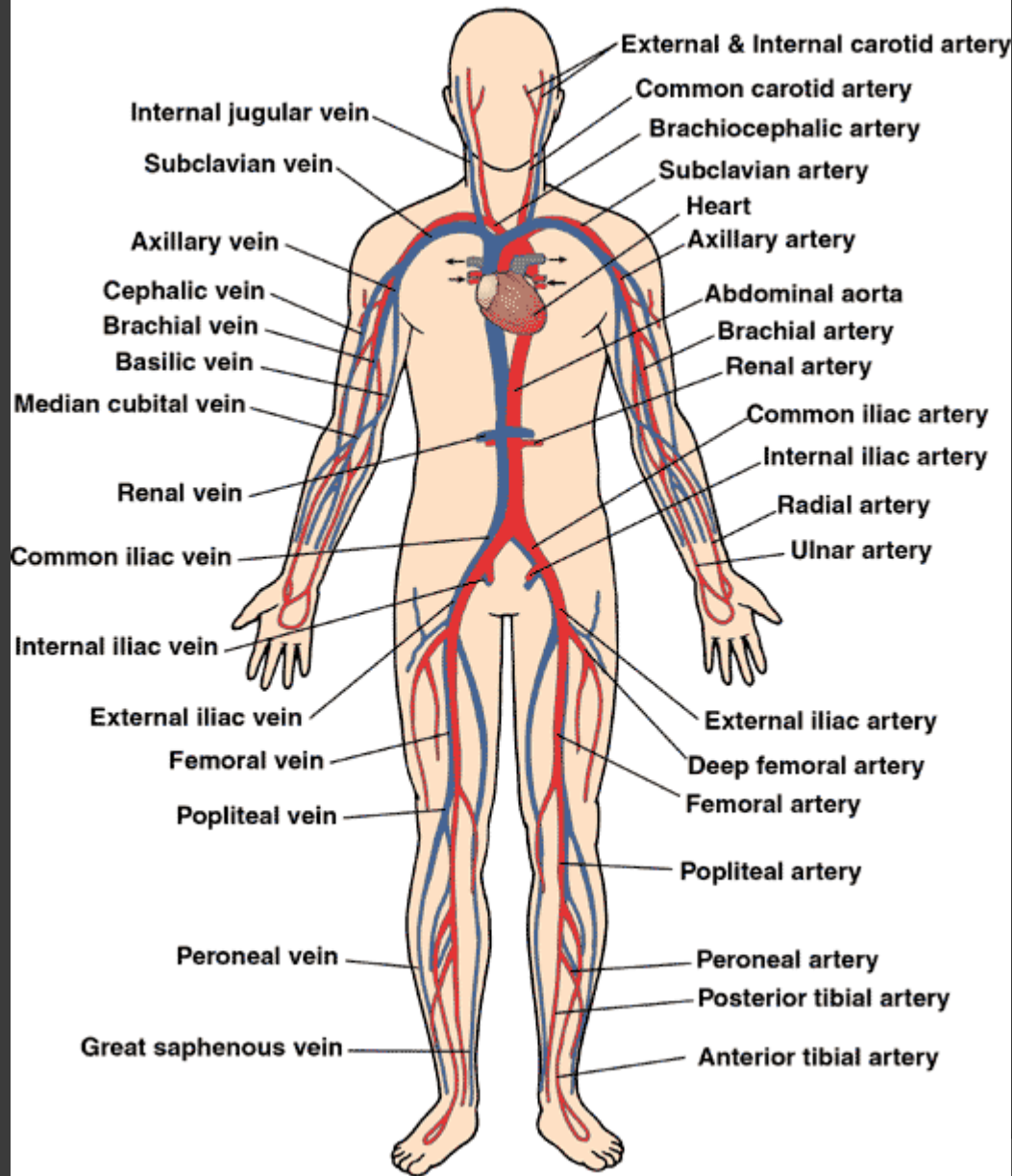
Consists of:

- Heart
- Veins
- Arteries
- Capillaries

Function:

- To transport blood, nutrients (chemicals needed for survival), gases and wastes.

Circulatory System



[Bill Nye](#)
[Video Clip](#)

NERVOUS SYSTEM

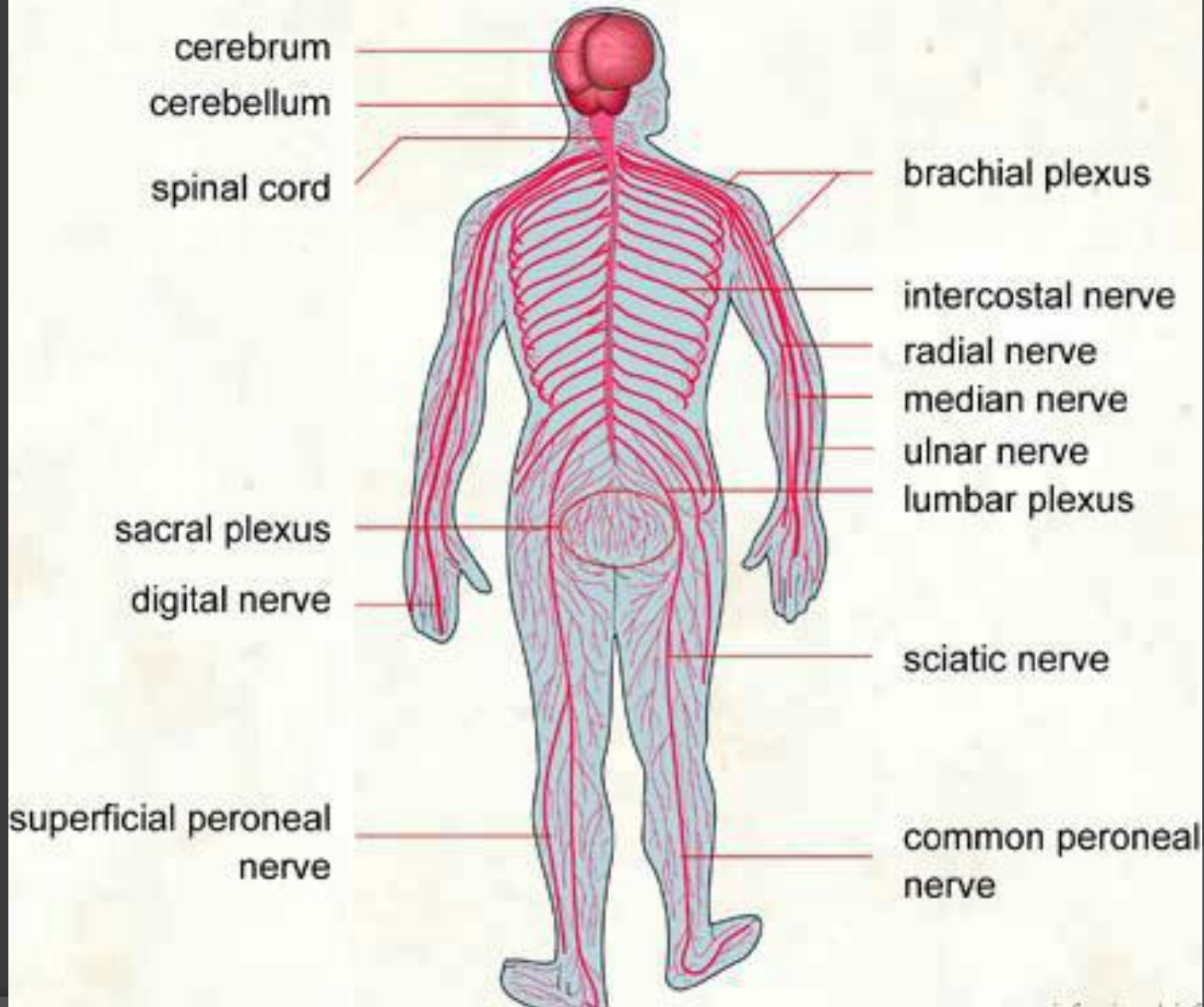
Consists of:

- Brain
- Sense organs (eyes, ears, nose, tongue, skin)
- Spinal cord
- Nerves

Function:

- To detect changes in the environment and to signal these changes to the body which then carries out a response.

NERVOUS SYSTEM



[School house
rock
Video Clip](#)

RESPIRATORY SYSTEM

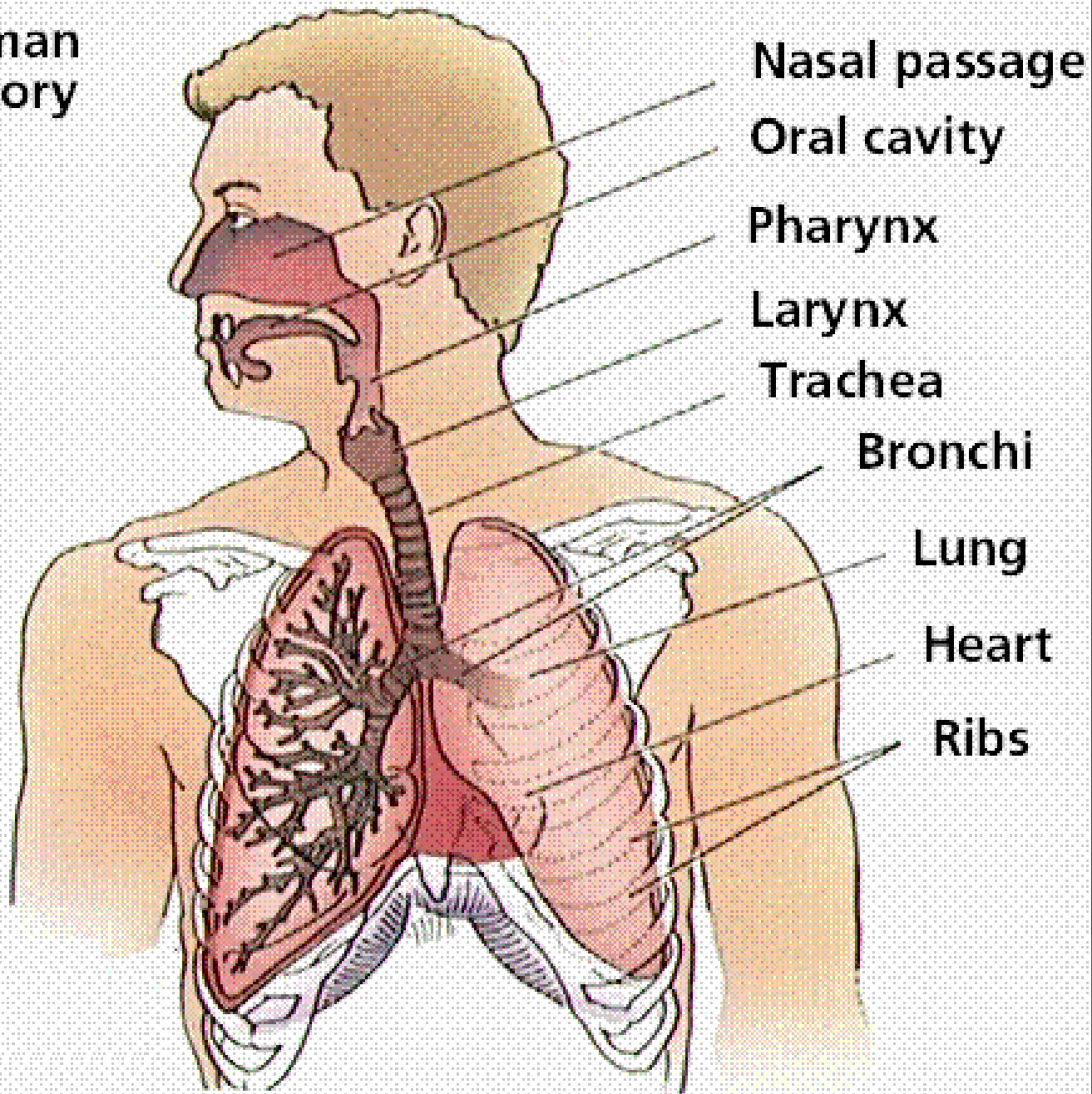
Consists of:

- Nasal cavity
- Trachea
- Lungs

Function:

- To control breathing, and exchange gases in lungs and tissues.

The Human Respiratory System



[Bill Nye](#)
[Video Clip](#)

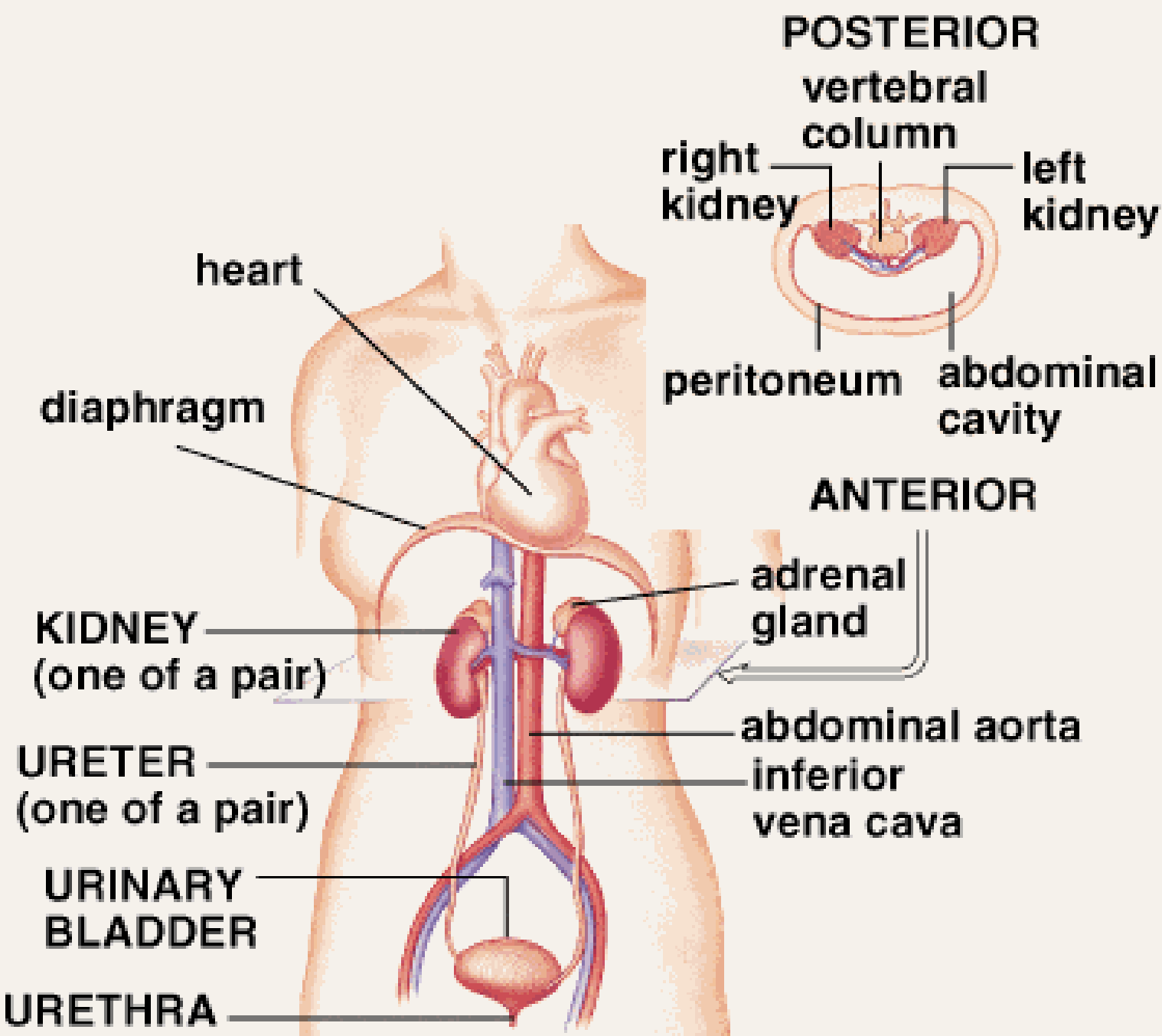
EXCRETORY SYSTEM

Consists of:

- Kidneys
- Urinary bladder

Function:

- To remove liquid and gas wastes from the body



[Video Clip](#)

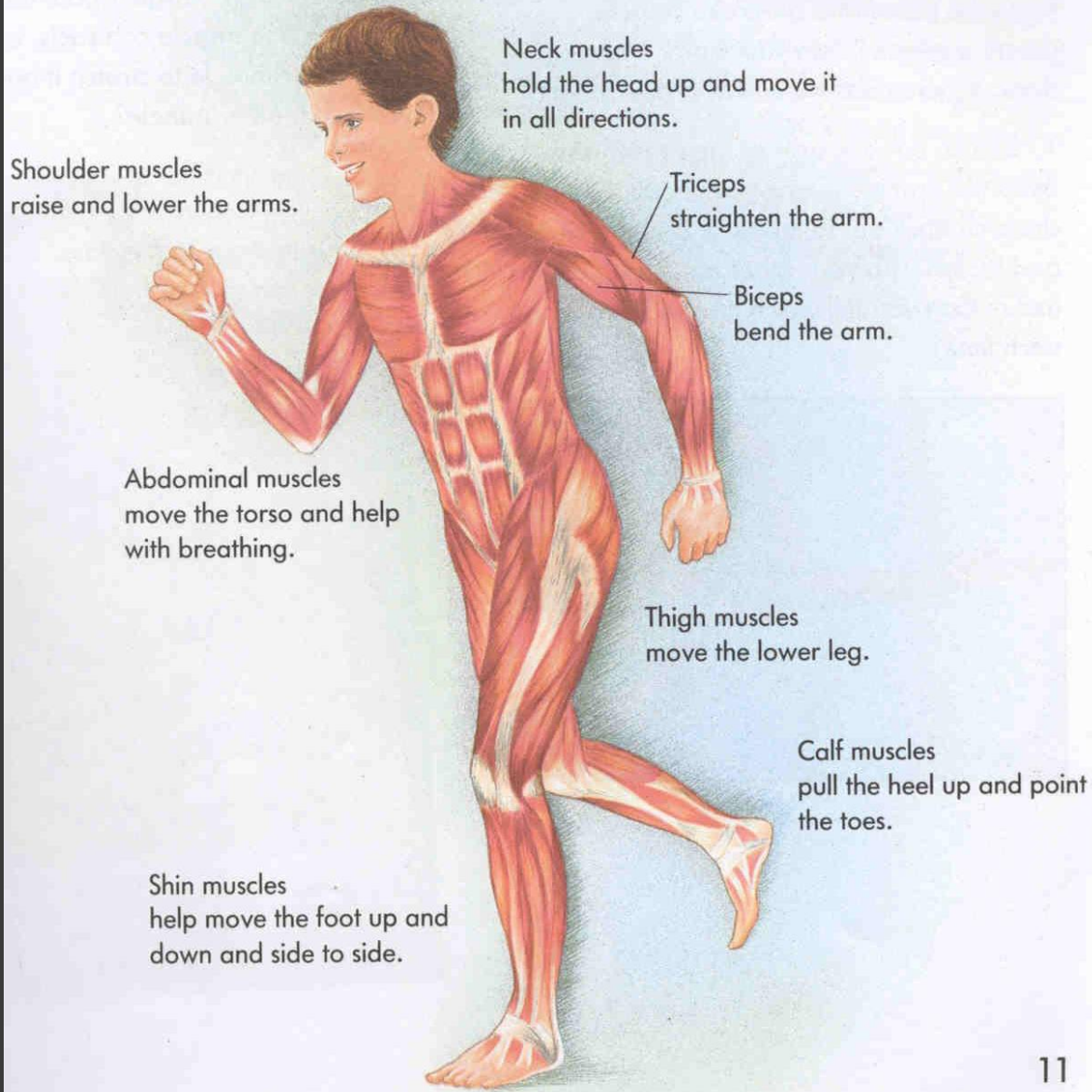
MUSCULAR SYSTEM

Consists of:

- Muscle tissue connected to bones throughout the body.

Function:

- To work with the bones to move body parts



Neck muscles hold the head up and move it in all directions.

Shoulder muscles raise and lower the arms.

Triceps straighten the arm.

Biceps bend the arm.

Abdominal muscles move the torso and help with breathing.

Thigh muscles move the lower leg.

Calf muscles pull the heel up and point the toes.

Shin muscles help move the foot up and down and side to side.

Video Clip

QUESTIONS IN TEXTBOOK

- Page 431 #s 1-6
- Page 432 #s 2, 6
- Body System
Assignment