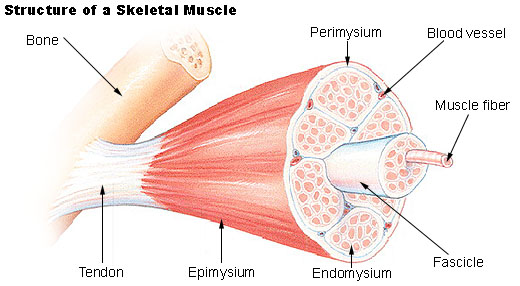
Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_

Animal Anatomy & Physiology Notes

1. *Describe the role of the muscular and skeletal system*

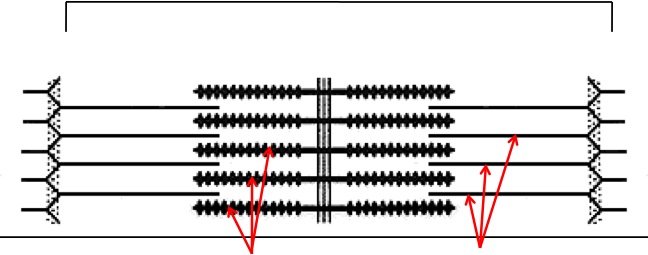
Muscular System:

Function & Purpose:

System is made up of:



Muscle Contraction:



* Distance between Z bands shorten
* Thin filaments slide past thick filaments

3 Types of Muscle:

Skeletal

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ portion of muscle
* Moves the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Attached to bones with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* VOLUNTARY muscles

Smooth

* Controls movement of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Peristalsis of digestive system, urinary system, etc
* INVOLUNTARY muscles

Cardiac

* Makes up the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* INVOLUNTARY muscles

Skeletal System

Function & Purpose:

System is made up of:



Cartilage

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that isn’t as hard as bone and is somewhat flexible
  + Nose & Ears

Long Bones

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bones in body
* Provides \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_for animal to stand and move

Short Bones

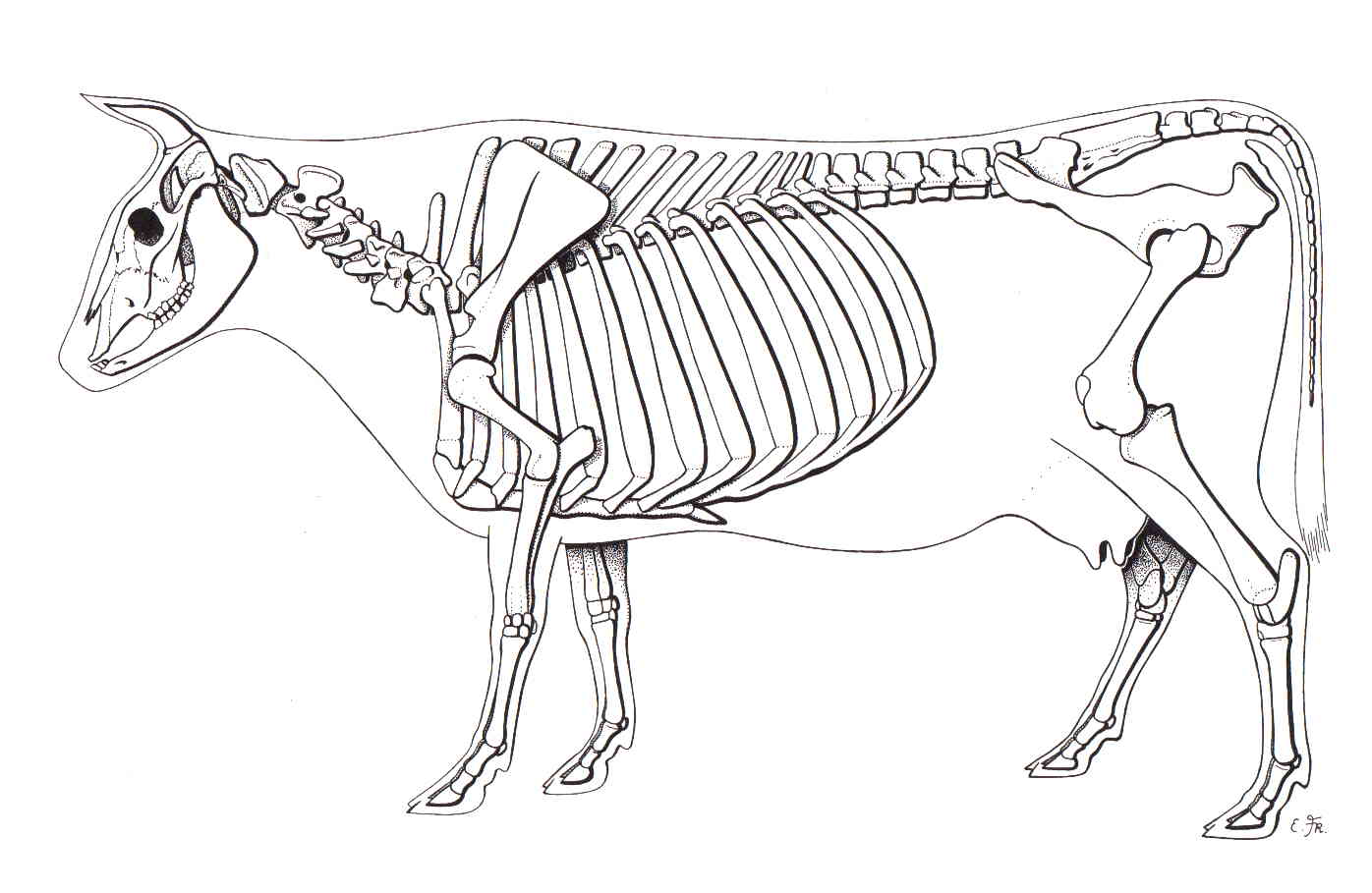
* Are often as big \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Mostly found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and give flexibility

Irregular Bones

* Are irregularly shaped
* Function as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Vertebrae
    - Cervical Vertebrae = Neck
    - Thoracic Vertebrae = Rib cage
    - Lumbar Vertebrae = Lower back
    - Sacral Vertebrae = Pelvic (hip) area
    - Coccygeal = From pelvis to end of tail

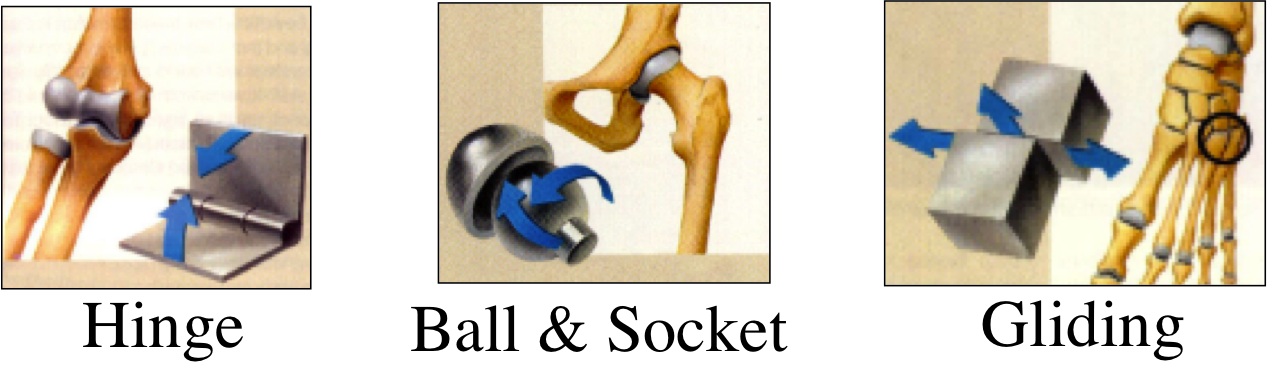
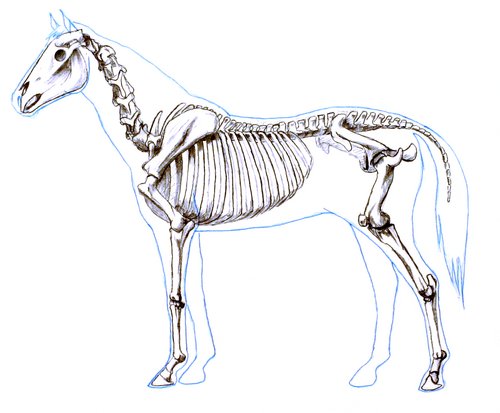
Flat Bones

* Relatively \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and flat
* Usually multiple flat bones \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ together
* Usually help \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_organs
  + Ribs & skull



Joints

* Connections of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the animal’s body
* Held together with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. *Describe the role of the respiratory & circulatory system*

Respiratory System

Function & Purpose:

System is made up of:



1. Nostrils

* + - Also called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Paired, external openings
      * Separated by nasal septum
    - Dilatable
      * Species Differences
        + Horse: Very Pliable and Dilatable
        + Pig: Rigid

2. Nasal Cavities

* + Separated by Nasal Septum, and from mouth by palate

3. Pharynx

4. Larynx

* + "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"
  + Organ of phonation (Sound Production)
  + Passing air causes vibration of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Syrinx

* + - * Voice Box for Birds

5. Trachea

* + - Primary passage way to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Cartilage Rings prevent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of airway

6. Bronchi

* + 2 main branches from trachea

7. Bronchioles

* + Smaller stems of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Alveoli

* + Principle site of gaseous diffusion between\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lungs

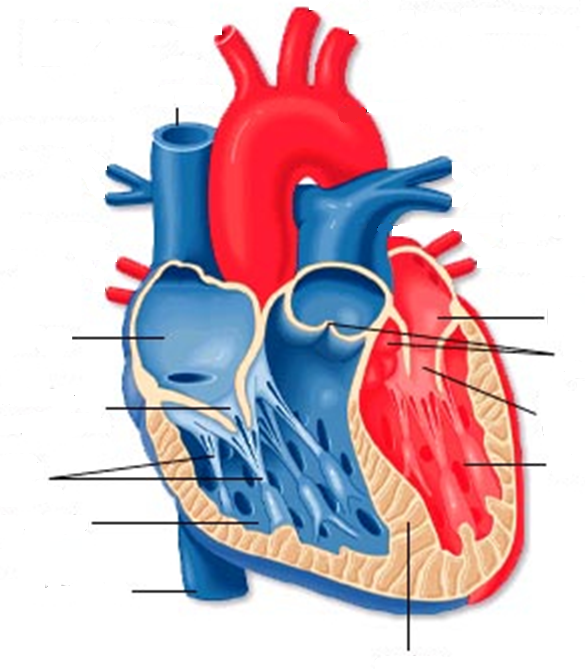
* + Principle Organ of Respiratory System
  + Paired, found in Thorax
    - a. Thorax expansion causes Lung expansion

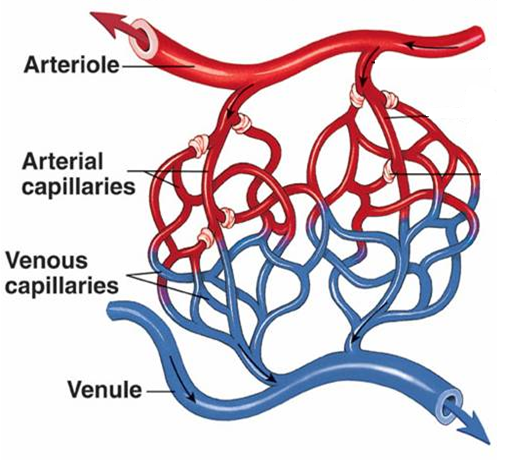
**Circulatory System**

**Function & Purpose:**

**System is made up of:**

* Closed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pathway
* Blood cells follow this path over, and over, and over again

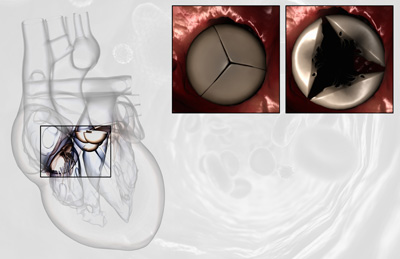


Follow the flow of blood through the circulatory system:

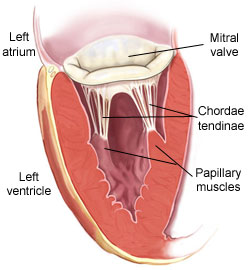
1. ***Capillary***

* Thin walled blood vessels
* Site of gas exchange
* Microscopic in size
* Every inch of your body is covered in hundreds of capillaries

1. ***Vein***
2. ***Superior/Inferior Vena Cava***
3. ***Right Atrium***



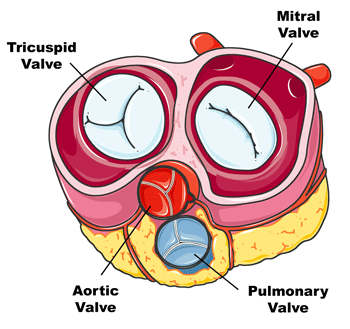
1. ***Tricuspid Valve***

******

1. ***Purkinje Fibers***

Purkinje Fibers

1. ***Right Ventricle***
2. ***Semilunar Valve***
3. ***Lungs***
   * Blood is oxygenated by lungs
   * Oxygen exchange takes place by passing from the alveoli (respiratory system) to the capillaries (circulatory system)
4. ***Left Atrium***



1. ***Mitral Valve***
2. ***Left Ventricle***

* Last (4th) chamber of the heart before blood leaves the heart through arteries

1. ***Arteries***

* LARGE blood passageways that take OXYGENATED blood AWAY from the heart

1. ***(Capillaries)*** *(start the path all over again)*
   1. Here is where the process starts all over
   2. Junction between arteries and veins
2. *Describe the role of the nervous system*

Nervous System

Function & Purpose:

System is made up of:



Brain

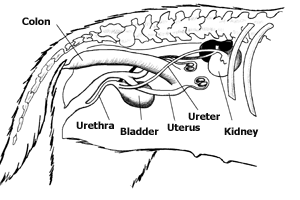
* + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_center of the nervous system

Nerves

* + Long, fiber like structures that send \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the body to the brain

Spinal Cord

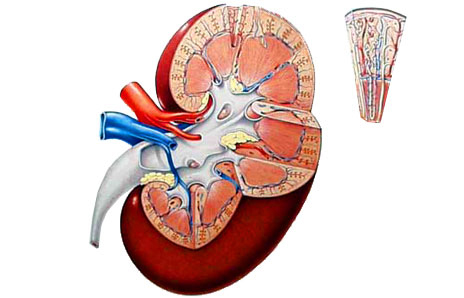
* + Long bundle of nervous tissue extending from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_to the lumbar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. *Describe the role of the excretory system*

Excretory System

Function & Purpose:

System is made up of:

* 

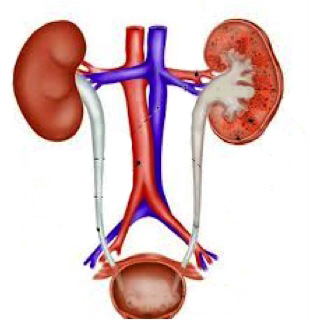
Kidneys

* Each animal has \_\_\_\_\_\_\_\_\_\_
* Filters \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from blood
* Toxins are excreted as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Ureters

* Each animal has 2
* Tube carrying urine from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Bladder

* Each animal has 1
* Stores \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ til it is excreted

Urethra

* Each animal has 1
* Passageway from bladder for urine to exit the body