***HUMAN BODY SYSTEMS!***

**Remember CTOS…**

* \_\_\_\_\_\_\_\_\_\_\_\_\_: the smallest basic unit of life
* \_\_\_\_\_\_\_\_\_\_\_\_\_: a group of similar cells working together to perform a specific function
* \_\_\_\_\_\_\_\_\_\_\_\_\_: a group of different tissues working together to perform a specific function
* \_\_\_\_\_\_\_\_\_\_\_\_\_: a group of organs working together to maintain homeostasis within body
* \_\_\_\_\_\_\_\_\_\_\_\_\_: a state of balance within the body

**There are 4 Types of Tissue:**  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- functions as a boundary. It covers each of your internal organs.  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- Messaging system; carries electrical impulses from your brain to various parts of your body  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- Movement; controlled and uncontrolled  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- Holds parts of the body together; provides support, protection, strength, padding, insulation

We have 300 bones at birth but only have 206 bones as fully developed adults. Why do you think this may be??

**Functions of the skeletal system:**

* Serves as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for all of the body’s movements
* Provides \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ soft organs inside of the body.

**3 Types of Bones!**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- arms and legs
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-feet and hands
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -ribs and skull

**Bone Tissue**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bone = Hard layer on outside of bones; gives support

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bone= Strong but lightweight. Calcium network is less dense. Marrow is found here!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= Produces red blood cells. These bring nutrients to the bone cells and carry wastes away.

**Axial vs. Appendicular Skeleton**

**Our skeleton changes as our body develops and ages!!**

* Bones are living tissue! They grow as the rest of the body grows!!

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:* newborns are born with spaces in their skulls. As the brain grows, these spaces begin to close.

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****:*** toward the end of adolescence, bones stop growing. The growth plate is the last portion of the bone to become hard. Once growth plates become hard, arms and legs stop growing.

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:* When bones stop growing, they go through cycles in which old one is broken down and new bone is formed. As people age, more is broken down then is formed and this can cause bones to break more easily.

**There are 3 types of joints:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- locks bones together like puzzle pieces.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - are able to flex slightly.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - allows our bodies to bend and move.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Joint:** The bones in the wrists and ankles slide against each other in a gliding motion. Try out this joint by holding either right above your wrist or ankle and moving it to the right and left, and up and down. The gliding joint gives your wrists and ankles lots of freedom so you can really move around.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Joint:** The first two vertebrae in your neck and the joint beneath your elbow move in a semicircle motion by twisting against each other. Try this first by holding your forearm and shoulder stationery, and notice that the bottom part of your arm can move in a semi circle back and forth. You can do the same thing with your vertebrae by holding the lower part of your neck, and rotating you head.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Joint:** The bones in the knees, elbows, fingers, and toes move just like the hinges on a door. If you're not quite clear on how they work, find the closest door and swing it back and forth. Notice that movement is somewhat limited, and it can only swing back and forth. Now try the same thing on your knees, elbows, fingers, and toes.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Joint:** The ball and socket joint allows your arms and hips to move in many directions. Try it! Up Down, right left, and a full 360°rotation give you a lot of freedom to get you where you want to go! Examples include the shoulder and hip.