

Name: \_\_\_\_\_ Group: \_\_\_\_\_ Date: \_\_\_\_\_

Study Guide for Science Quiz on Friday, Feb. 11, 2010

**The Skeletal System**

**Least to Most Complex**

Cells are the least complex thing that makes up your body.

Tissues are made of similar cells that work together.

Organs are made of tissue and organs function to do certain tasks in your body to maintain how you function.

Organs make up organ systems that all work to do one main task. Some organ systems include the digestive system, skeletal system, urinary system, nervous system, etc.

Finally, the organ systems make up your whole body and maintain homeostasis.

\*You can see a diagram of this in your class notes or on Mr. S's Science Wiki.

**Now that you know that, can you answer the following question?**

What is the difference between a tissue and an organ?

\*This was a class opener.

**Skeletal System**

- bones, cartilage, and connective tissue that holds bone together to make up your skeletal system

**Bone**

- an organ made up of connective tissue, minerals and osteoblasts
- osteoblasts are cells that deposit minerals

**Parts of Bone**

- Compact Bone- compact and dense part of the bone, typically the outer layer
- Spongy Bone- contains open spaces (sponge) and provides strength and support for the bone. (like your IT bridges in Tech Ed)
- Marrow- red marrow produces blood cells and yellow marrow is stored fat
- If you look at your graph of the parts of bone, you will also find other parts.

**Cartilage**

- a type of connective tissue that is dense and flexible. Most of your bones start out as cartilage until it receives minerals and grows into bone. (ossification)
- it also cover the ends of the bone to act like a cushion at the joint

**Joint**

- a place where two bones meet; fixed joints don't move and movable joints have limited movement

**Ligament**

- strong bands of connective tissue that hold bone to bone at a movable joint

**Four Functions of the Skeletal System**

- Protection- protects the heart, lungs, brain, and spinal cord. \*the ribcage protect the heart and lungs; the skull protects the brain; the vertebrae protects your spinal cord
- Storage- stores minerals for use by the muscles and nerves and stores fat for energy.
- Movement- muscles pull on bones to produce movement at a joint
- Blood cell formation- some bones have red marrow to make new blood cells

**Diseases of the skeleton**

- Osteoporosis causes bone to become less dense (Ostio refers to bone, porous means having holes)
- Arthritis causes joints to stiffen and swell (Arthro refers to joints, itis refers to infection)
- There are many other bone diseases.
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\*This information is from class notes, read your textbook and look on Mr. S's Science Wiki for more notes. Also look back at your worksheets you completed in class to prepare you for the test. Thanks!