UNIT 4 - SKELETAL SYSTEM
ACTIVITY - Skeletal Tissue Worksheet

Name __________________________________________________ Period ________

1. What are six principal functions of the skeletal system?
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________

2. What other systems of the body depend on a healthy skeletal system? Why?

3. ______________________ is the branch of medical specialty that treats conditions of the bones and joints?

4. The skeletal system consists of two types of connective tissue. What are they?
   ________________________________________________
   ________________________________________________

5. What are the two types of bone? ____________________
   ______________________

6. Matching:
   A. Articular cartilage  EP. Epiphyseal Plate
   E. Endosteum  O. Osteogenic periosteum
   F. Fibrous periosteum  D. Diaphysis

   _____a. Thin layer of hyaline cartilage at end of long bone
   _____b. Region of a long bone where lengthwise growth takes place
   _____c. Outer layer of covering over bone - ligaments and tendons attach here
   _____d. Inner layer of covering over bone; osteoblast here permit increase in diameter
   _____e. Layer of bone cells lining the marrow cavity
   _____f. Shaft or long, main, portion of the bone

7. Describe:
   a. Compact Bone
   b. Spongy Bone
8. Describe these three kinds of bone or osseous tissue cells:
   a. Osteoblast
   b. Osteocyte
   c. Osteoclast

9. Complete these questions about bone growth.
   a. Cartilage cells multiply on the (epiphysis / diaphysis) side of the epiphyseal plate, providing temporary new tissue. But cartilage cells then die and are replaced by bone cells on the (epiphysis / diaphysis) side of the epiphyseal plate.
   b. Contrast the epiphyseal plate with the epiphyseal line.
   c. Defend or dispute this statement: "Once a bone, such as your thighbone, is formed, the bone tissue is never replaced unless the bone is broken."

10. Complete these questions about skeletal changes that occur during exercise and aging.
    a. Exercise (strengthens / weakens) bones. A healing bone that is not exercised is likely to become (stronger / weaker) during the period that it is in a cast.
    b. The pull of muscles upon bones, as well as the tension on bones as they support body weight during exercise, causes (increased / decreased) production of the protein collagen.
    c. The stress of exercise also stimulates (osteoblast / osteoclasts) and increases production of the hormone calcitonin which inhibits (osteoblast / osteoclasts)
    d. The amount of calcium in bones ___ - creases with age. As a result, bones of the elderly are likely to be (stronger / weaker) than bones of younger persons. This change occurs at a younger age in (men / women).
    e. Another component of bones that decreases with age is ______________________. What is the significance of this change?