**CHAPTER 6: OSSEOUS TISSUE AND THE SKELETAL SYSTEM**

READING ASSIGNMENT: Read pages 184-210. Bone markings will be covered in topics in Chapter 7 (axial skeleton).

Overview

1. Functions –

B. Classification of Bones

C. Shape of Bones

How many different types of bones are described for the body?

List the types and give an example in the space below.

D. Microscopic Structure of Bone

1) The Osteon

2) Composition of Bone

a) Cells

b) Matrix

E. Bone Development- Be able to compare, contrast and describe

*Two Types*

1) Intramembrane Ossification

2) Endochondral Ossification

F. Bone Growth- Be able to compare, contrast and describe

1) Appositional Growth

2) In Length

3) Bone Remodeling

4) Factors Affecting Bone Growth

**ASSIGNMENTS**

Lecture Guide

1) List the functions of the skeletal system. How does the microscopic structure of bone contribute to these functions?

2) Why is bone classified as a connective tissue? List the different types of bone and give an example of each.

3) Draw a cross-section of an osteon (Haversion system) and label the following terms: osteon, blood vessels, nerve, osteocytes, lacuna, canaliculi, lamella.

4) Name and describe two types of ossification. What is the difference between each type of ossification? What types of bones are formed by each process and name some specific examples.

5) What are the components of the matrix in bone? List the cells found in bone and their functions.

6) How does bone grow in length and width?

7) Name the hormones involved with bone growth and development and their effects.

8) In Harry Potter and the Chamber of Secrets, Harry’s arm is broken in a Quiddich match. One of his professors mistakenly removes the bones from his arm. He is given skeleto-gro potion to grow his bones back to normal. Supposing that the bones grow just as embryonic bone, what

describe the whole process of bone formation and remodelling that Harry will have to experience. Be sure to discuss the roles of chondrocytes, osteoblasts, osteocytes, and osteoclasts as well as changes in the composition of the matrix.

9) What factors would influence the regrowth of the bone in Harry’s arm?

**Textbook Chapter 6 (page 209-10)**

Level 1: Reviewing Facts and Terms: 1-7, 11-15

Level 2: Reviewing Concepts: 20, 21, 23

Level 3: Critical Thinking and Clinical Application: 27-29