Overview of the Skeleton

The Skeleton – Bone & Cartilage
- Be able to distinguish between the Appendicular and Axial skeletons (Fig 9.1)
- Know examples of where Hyaline, Elastic, and Fibrocartilage can be found on the body (Fig. 9.5). How does each type differ in flexibility and sturdiness?
- Know that the amount of cartilage in the skeleton differs between infants and adults
- What are the different types of bone cells? How do they relate to osteoporosis?
- Bone composition – Mineral and cartilage

The Classification of Bones
- Be able to classify every bone in the body as Long, Short, Flat, or Irregular.

Gross Anatomy of a Long Bone (Activity 1)
- Know the following structures on a long bone (Fig. 9.2):
  - Epiphysis
  - Diaphysis
  - Spongy bone
  - Compact bone
  - Epiphyseal line
  - Articular cartilage
  - Periosteum
  - Medullary cavity
  - Yellow bone marrow
  - Red bone marrow

- You should be able to identify these parts on the femur cross-section provided in lab
- Know how an epiphyseal plate (growth plate) differs from an epiphyseal line
- Know the function of red bone marrow
- What are shin splints?

Chemical composition of Bone (Activity 2)
- Know what component makes bones hard and what makes them flexible

The Microscopic Structure of Compact Bone (Activity 3)
- Know the following structures on the bone slide image (Fig. 9.3c):
  - Osteon (Haverian system)
  - Central (Haversian) canal
  - Lacunae
  - Bone cells (osteocytes)

Bone Markings (Table 9.1)
- Know the bone markings in Table 9.1 EXCEPT for “Ramus”
- Be able to define each type of marking on a picture and on an actual bone.
- Know what bone markings do i.e. what general functions do they perform?

Recommended Homework:
Pg. 119-122, Question #1-15, Except for: # 7, 8, 14.