Bone Anatomy & Fractures (Skeletal System)

**Directions**
Use class notes and Unit 6.4 in hardcopy book and Chapter 7.4 in electronic edition to answer the following.

**Labeling Bone Anatomy**
Label the missing long bone components.

|------------------------|--------------|---------------------|-----------------|--------------|----------------------|-------------|------------------|

**Bone Anatomy**
Define the following components of bone anatomy and, when possible, explain their functions (physiology).

9. **diaphysis:** The shaft, or middle section, of a long bone
10. **epiphysis:** The end or head at the extremity of a long bone
11. **medullary canal:** Inner, or central portion, of a long bone
12. **yellow marrow:** Soft tissue in the diaphysis of long bones that contains fat cells
13. **red marrow:** Soft tissue in the epiphyses of long bones that creates red/white blood cells & platelets
14. **periosteum:** Fibrous membrane that covers the bones except at joint areas

**Bone Physiology (Function)**
List the five functions of bone, and explain each.

15. **Framework** The bones form a framework to support the body’s muscles, fat, and skin.
16. **Protection** Bones surround vital organs to protect them. Ex: Skull protects the brain.
17. **Levers** Muscles attach to bone to help provide movement.
18. **Blood Cells** Bones help produce red and white blood cells and platelets (Hemopoiesis/Hematopoiesis).
19. **Storage** Bones store most of the calcium supply of the body.
Bone Fractures
Label each bone fracture with the correct type of fracture.

Types of Fractures
Describe each type of bone fracture. When possible, include the most common injury related to each fracture type.

28. **colles**: breaking and dislocation of the distal radius that causes a characteristic bulge at the wrist
29. **comminuted**: bone fragments or splinters into more than two pieces
30. **compound**: bone breaks and ruptures through the skin; creates increased chance of infection
31. **depressed**: a broken piece of skull bone moves inward; common with severe head injuries
32. **greenstick**: bone is bent and splits, causing a crack or incomplete break; common in children
33. **impacted**: broken bone ends jam into each other
34. **simple**: complete break of the bone with no damage to the skin
35. **spiral**: bone twists resulting in one or more breaks; common in skiing and skating accidents