**Name:** ______________________________________

**Histology – Work sheet**

**Labeling:** Use the following diagram to help learn the terminology.

- **lamellae** (Layer)
- **osteon**
- **Central blood vessels**
- **Trabeculae**
- **Perforating Canal**
- **(Space containing vessels)**
- **(Vessels)**
- **(Layer)**
Matching:

1. Fibrocartilage 3. ___a. Most abundant cartilage
2. Elastic cartilage 1. ___b. Cartilage found in body areas subject to high levels of compaction stress
3. Hyaline Cartilage 4. ___c. The semisolid gel ground substance secreted by chondrocytes
4. Chondroitin Sulafate 2. ___d. The most flexible cartilage

Fill-in's: Answer the following questions:

1. The bone cells responsible for the active secretion of bone matrix are: ___osteoblasts________________
2. The bony matrix is hardened by the addition the calcium phosphate and calcium hydroxide minerals collectively called: __hydroxyapatite________________
3. Unspecialized bone cells derived from mesenchymal. Cells, which have the potential to develop into active bone matrix secreting cells (osteoblasts) are called: ___osteoprogenitor cells________________
4. The ___osteon____________________ are the structural and functional units of compact bone.
5. The concentric ring of matrix arranged around the central canal are called: ___lamellae________
8. The small space which “houses” the mature osteocytes is called the: ___lacunae___
9. The bony struts or “little beams” which comprise the lattice of spongy bone are called: __trabeculae___
10. Small communicating canals connecting the osteocytes within the lacunae to the central blood vessels: ___canaliculi_______________________