Lab 11 Skeletal system

Name _____ Seat number ____

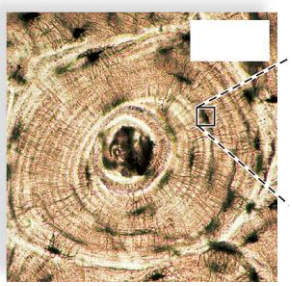
Objectives:

A. Compact bone
B. Hyaline bone
C. Longitudinally sliced bone
D. Axial skeleton
E. Appendicular skeleton
F. Movement at synovial joints

A. Compact bone

Identify on the model and under the microscope the following structures:

1. osteon	2. central canal	3. osteocytes



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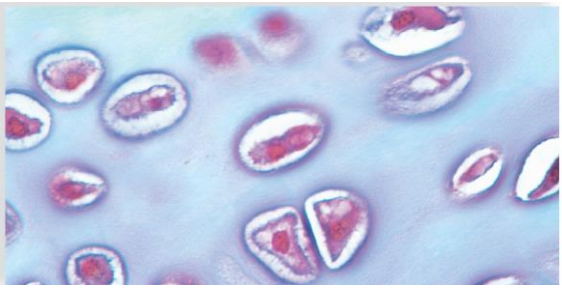
B. Hyaline Cartilage

Identify the following structures under the microscope:

1. matrix	2. chondrocytes



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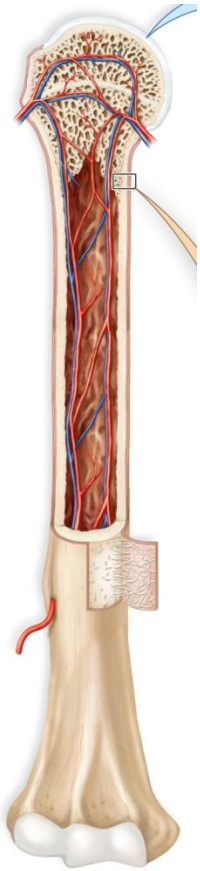
C. Longitudinally Sliced Bone



Identify the following structures

1. growth (epiphyseal) plate
2. compact bone
3. spongy bone
4. medullary cavity
5. epiphyses (plural of epiphysis)
6. diaphysis
7. periosteum

D. Axial Skeleton

Be able to identify these structures on the bones in lab

1. Vertebra
    2. Identify the various regions of the spinal column:
        a. C1 (atlas)
        b. C2 (axis)
        c. cervical vertebrae
        d. thoracic vertebrae
        e. lumbar vertebrae
        f. (sacrum; and coccyx on articulated skeleton)

3. Identify the main features of a 'typical' vertebra:
        a. vertebral canal
        b. body
        c. spinous process

4. Sternum
    a. manubrium
    b. body
    c. xiphoid process

5. Ribs
    a. ribs 1-7 true ribs
    b. ribs 8-12 false ribs
    c. ribs 11 and 12 false and floating ribs

E. Appendicular Skeleton

1. Upper Appendicular Skeleton

A. clavicle

B. scapula; glenoid cavity, acromion process and coracoid process

C. humerus; head, greater tubercle, deltoid tuberosity, trochlea and capitulum

D. radius; head

E. ulna; head

F. carpals, metacarpals and phalanges (digits)

2. Lower Appendicular Skeleton

A. coxal bone; ilium, pubis, ischium and acetabulum

B. femur; head, greater and lesser trochanters, medial and lateral condyles

C. patella

D. tibia; medial malleolus

E. fibula; lateral malleolus

F. tarsals including calcaneus and talus; metatarsals and phalanges (digits)

F. Movements at synovial joints

Remember, muscles contract and joints flex. Muscles don't flex.

Please be able to recognize these movements.
Draw little stick figures to illustrate each action.

1. **flexion**- decrease of joint angle

2. **extension**- increase of joint angle

3. **adduction** and **abduction**

4. **medial** and **lateral rotation**

5. **circumduction**

6. **inversion** and **eversion**