

Bio 103: Computer Exercise – Anatomy & Physiology Revealed (APR)

Skeletal System

- A. See Lab Instructor to sign logbook for use of laptop and cd in the lab room.
- B. Insert Anatomy & Physiology Revealed (APR) cd into cd drive.
- C. Click on icon (A&P Revealed) on desk top
- D. View Home Screen. Take one or more of the tours (select bottom right) to Familiarize yourself with the navigational tools:
 - Dissection – “melt-away” layers of dissection to reveal individual structures
 - Animation – view animations of anatomical structures and systems
 - Imaging – correlate dissected anatomy with radiologic images
 - Self-test – gauge proficiency with timed self-tests

Part I. Skull

- i. Select System → **Skeletal**. Select **Dissection** (scalpel icon) → Select Topic → **Head and Neck**. Select View → **Lateral**. Click the green **GO** button.
Review the following under “**Structure Group**”. Study the unique feature under each group.
 - Frontal
 - Parietal
 - Temporal
 - Zygomatic
 - Mandible

*More specific structures can be found under the second drop-down menu “Select Structure”.

- ii. Select **Change Topic/View** → **Head and Neck**. Select View → **Anterior**. Click the green **GO** button.
Review the following under “**Structure Group**”. Study the unique features under each group.
 - Ethmoid
 - Maxilla
 - Nasal
 - Vomer

Select **Change Topic/View** → **Skull-Cranial Cavity**. Click the green **GO** button.

- Review the following under “**Structure Group**”. Study the unique features under each group.
- Cribriform plate
 - Crista galli
 - Foramen magnum
 - Occipital condyles
 - Body / Greater & Lesser Wings of Sphenoid

iii. Select **Animation** menu. Select **Skull**. Click the **Play** button.

After viewing the animation, answer the following questions:

1. What is the function of foramina? _____

2. Olfactory nerves pass through what structure? _____

3. What is the only movable joint in the skull? _____

4. Which bones form the only movable joint in the skull? _____

(Be Specific)

5. Which bone contains the foramen magnum? _____

6. What structure passes through this opening? _____

7. Name the six bones that form the orbit of the eye:

Part II. Vertebrae, Ribs, Sternum

i. Select **Dissection** (scalpel icon) → Select Change Topic/View → **Thorax:Anterior**.

Click the green **GO** button.

ii. Review the following under "**Structure Group**". Study the unique features under each group.

- Clavicle
- Sternum
- Vertebral Column
- Ribs

iii. Answer the following questions:

1. Which ribs are called "true ribs"? _____

2. Which ribs are called "false ribs"? _____

3. Which ribs are called "floating ribs"? _____

Why? _____

4. What structure is used as a land mark for cardiopulmonary resuscitation? _____

Part IV. Upper Appendicular

- i. Select **Dissection** (scalpel icon) → Select Change Topic/View → **Scapula / Humerus / Radius and Ulna**. Click the green **GO** button.
- ii. Review the following under “**Structure Group**”. Study the unique features under each group.
 - Scapula
 - Humerus
 - Radius
 - Ulna
- iii. Answer the following questions:
 1. What part of the scapula articulates with the head of the humerus? _____
 2. What part of the humerus is a common site of fractures? _____
 3. The projection of the wrist, along the thumb side of the arm, is what structure?

Part V. Lower Appendicular

- i. Select **Dissection** (scalpel icon) → Select Change Topic/View → **Hip and Thigh/Anterior**. Click the green **Go** button.
- ii. Review the following under “**Structure Group**”. Study the unique features under each group.
 - Hip Bone (os coxa)
 - Femur
- iii. Select **Dissection** (scalpel icon) → Select Change Topic/View → **Tibia and Fibula/Anterior**. Click the green **GO** button.
- iv. Review the following under “**Structure Group**”. Study the unique features under each group.
 - Tibia
 - Fibula
- v. Answer the following questions:
 1. Name the part of the os coxa which provides attachment of back, thigh, and abdominal wall muscles; as well as serves as a landmark for intramuscular injections.

2. The lateral projection of the ankle is formed by which structure?

What bone has this structure?

3. The “shin” is the common name for which bone?

Close program.

Remove CD & put in case before shutting down computer.

Shut down computer and return hardware and software to your lab instructor.