

Basic Anatomy & Physiology Lab Book: Levels of Organization

Directions:

Develop the following diagrams to be placed in the *Basic Anatomy & Physiology Lab Book*.

1. Level of Organization Diagram

- a. The diagram must be hand drawn similar to the graphic on slide 61.
- b. The diagram must include the following locations/structures and should be labeled:
 - Atom
 - Molecule
 - Cell
 - Tissue
 - Organ
 - Organ system
 - Organism

2. Cell Diagram

- a. The diagram must be hand drawn and resemble the graphic on slide 67.
- b. The diagram must include the following areas which should be labeled:
 - Centrioles
 - Mitochondria
 - Peroxisome
 - Secretory vesicle
 - Smooth endoplasmic reticulum
 - Rough endoplasmic reticulum
 - Vacuola
 - Lysosome
 - Plasma membrane
 - Golgi complex
 - Ribosomes
 - Nuclear membrane
 - Nucleolus

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3. Epithelial Tissue Diagrams

- a. The diagrams must be hand drawn and resemble the graphic on slides 75-91.
- b. The diagrams must include the following areas which should be labeled:
 - Epithelial tissue
 - Simple squamous epithelium
 - Simple cuboidal epithelium
 - Simple columnar epithelium
 - Stratified squamous epithelium
 - Stratified cuboidal epithelium
 - Transitional epithelium
 - Pseudostratified columnar epithelium

4. Muscular Tissue Diagram

- a. The diagrams must be hand drawn and resemble the graphic on slide 102.
- b. The diagrams must include the following areas which should be labeled:
 - Muscle Tissue
 - Myofibril
 - Sarcomere

5. Muscle Tissues Diagrams

- a. The diagrams must be hand drawn and resemble the graphic on slides 103-105.
- b. The diagrams must include the following areas which should be labeled:
 - Skeletal muscle tissue
 - Smooth muscle tissue
 - Cardiac muscle tissue

6. Nervous Tissue Diagram

- a. The diagram must be hand drawn and resemble the graphic on slide 106.
- b. The diagram must include the following areas which should be labeled:
 - Nerve tissue
 - Spinal nerve
 - Epineurium
 - Perineurium
 - Unmyelinated nerve fiber
 - Myelinated nerve fiber
 - Blood vessels
 - Fascicle
 - Nerve Fibers
 - Endoneurium