

Introduction & Terminology worksheet

Name _____

Section A: Intro to A&P

1. Define anatomy. _____
2. Define physiology. _____
3. How does the anatomy of an organ determine its function? Provide an example. _____
4. Which type of anatomy?
 - a. If asked to study organs in the abdominal cavity. _____
 - b. If asked to study how the skin changes as one ages. _____
 - c. If asked to identify epithelial tissue within the body. _____
 - d. If asked to examine organs in the cardiovascular system. _____
5. Identify the levels of organization starting with the simplest and concluding with the most complex. _____
6. What do you call a group of cells that perform similar functions? _____

Section B: Systems

1. Locate the following organs using diagrams in the textbook. For each organ listed, indicate what organ system it belongs to. After filling in the chart, find the organs on the models.

Organ	Organ System
Heart	
Lungs	
Trachea	
Larynx	
Esophagus	
Stomach	
Small Intestines	
Kidneys	
Urinary Bladder	
Brain	
Ovaries	
Spinal Cord	

2. State the general function of each organ system listed.

Organ System	General Function of System
Skeletal	
Muscular	
Endocrine	
Respiratory	
Digestive	
Urinary	
Cardiovascular	
Nervous	
Integumentary	

Lymphatic	
Immune	
Reproductive	

- Get a bag of index cards and practice matching the systems, organs and functions. After matching the cards, check your notes to see if you are correct.

Section C: Homeostasis

1. For your body to maintain homeostasis, it must perform and maintain a minimum of 12 functions that we have come to call characteristics of life. Identify 5 of these characteristics and give a brief explanation of what each characteristic is.

2. What are the 5 survival needs of the human body?

3. Nutrients, water and oxygen are basic materials our body needs to survive. Why is temperature and atmospheric pressure so important for the survival of the human body?

4. What is homeostasis?

5. How is communication essential for homeostasis and which system(s) are responsible for it?

Section D: Terminology

A precise set of terms and planes have evolved to describe positions, relationships, and directions within the human body. To avoid confusion they must always be related to the standard *anatomical position* standing erect, palms of the hands forward.

Planes are fixed lines of reference along which the body is often divided (sectioned) to facilitate the viewing of structure. By studying a region from sagittal, transverse, and frontal planes of reference a 3-dimensional perspective can be obtained.

Terms of *position* and *direction* describe the position of one organ relative to another, usually along one of the three major body planes. Color the body planes and directional terms (arrows) in the diagram.

BODY PLANES

a. Median, Midsagittal – Color Red

Divides the body into left/right halves.

b. Sagittal – Color Green

Divides the body into unequal left and right parts and parallel to the median plane.

c. Frontal, Coronal – Color Blue

Divides the body into anterior and posterior parts.

d. Transverse, Cross Horizontal – Color Yellow

Divides the body into upper and lower parts.

ANATOMICAL DIRECTIONS

e. Cranial, Superior – Color Orange

These terms refer to a structure being closer to the head or higher than another structure in the body.

f. Caudal, Inferior – Color Brown

These terms refer to a structure being closer to the feet or lower than, another structure in the body

g. Anterior, Ventral – Color Gray

These terms refer to a structure being more in front than another structure in the body.

h. Posterior, Dorsal – Color Purple

These terms refer to a structure being more in back than another structure in the body.

i. Medial – Color Pink

This term refers to a structure being closer to the median plane than another structure in the body

j. Lateral – Color Dark Green

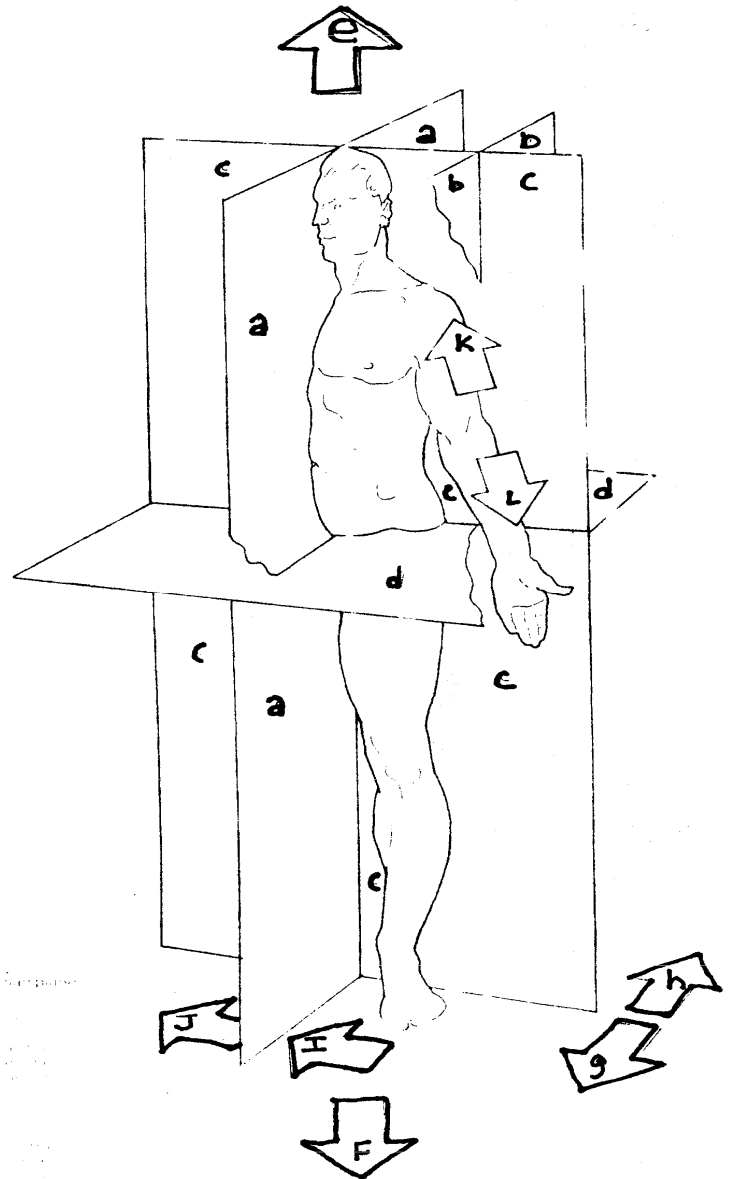
This term refers to a structure being further away from the median plane than another structure in the body

k. Proximal – Color Dark Blue

Employed only with reference to the limbs, term refers to a structure being closer to the median plane or root of the limb than another structure in the limb

l. Distal – Color Black

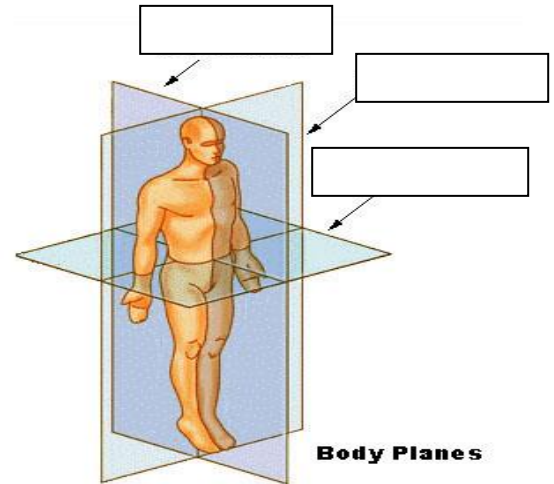
Employed only with reference to the limbs, term refers to a structure being further away from the median plane or the root of the limb than another structure in the limb.



Section E: Directional Terminology

1. What is the advantage for the medical community to use a “universal” language?
2. Describe the anatomical position. Why might it be confusing if we did not use this position as a reference point?
3. Identify the correct directional term.
 - a. _____ means toward the front
 - b. _____ means further away from the point of attachment of a limb
 - c. _____ means towards the head or up
 - d. _____ means closer to the body surface
 - e. _____ means towards the midline

4. Use the directional terms to complete the following statements.
 - a. The esophagus is _____ to the spinal cord.
 - b. The heart is _____ to the diaphragm and _____ to the lungs.
 - c. The kidneys are _____ to the heart.
 - d. The knee is _____ to the hip, but _____ to the foot.
 - e. The spine is _____ to the sternum.
 - f. The sternum is _____ to the heart.
 - g. The cranium is _____ to the scalp.
 - h. The nose is _____ to the ears.
 - i. The elbow is _____ to the fingers.

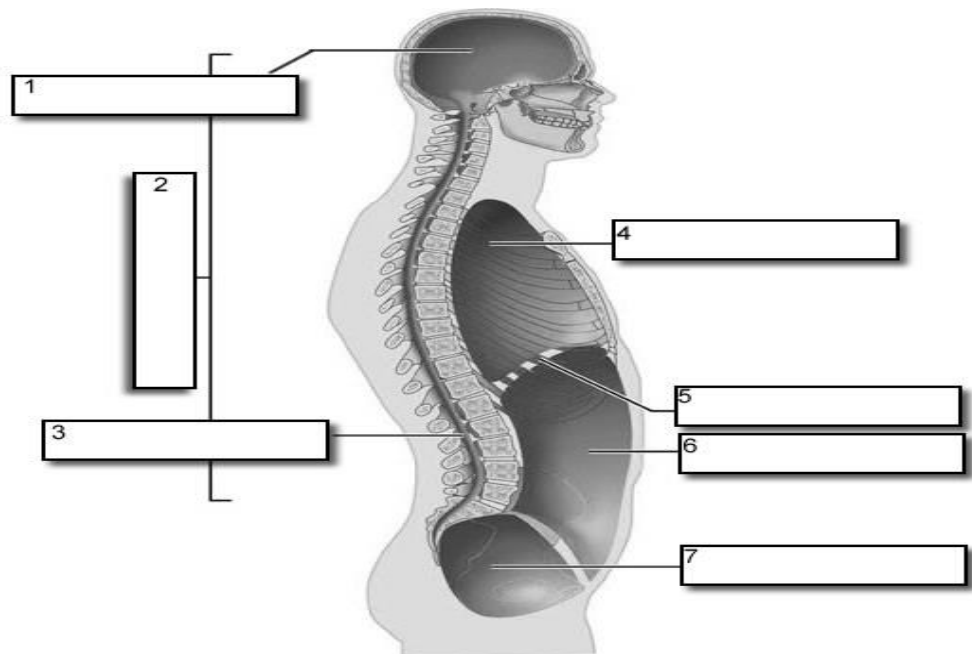


Section F: Body Planes

1. Identify the planes or sections on the diagram.
2. Use the terms to indicate the plane or section.
 - a. Name the plane in which the entire width of the sternum may be seen. _____
 - b. Name the plane that divides the body into mirror image halves. _____
 - c. A plane that divides the forearm into proximal and distal portions is a _____ section.
 - d. A plane parallel to the midsagittal plane is a _____ plane.
 - e. A plane removing just the tip of the nose parallel to the face is a _____ section.
 - f. Looking at the cut surface of the removed nose is a _____ view.
 - g. Looking at the bottom of a brain removed from the cranium is a _____ view.
 - h. Looking at the heart from the right side of a right _____ view.
 - i. Assume a midsagittal section of the brain. When looking at the cut surface, this is a _____ view.
 - j. You were told to cut an animal along two planes so that both lungs are observable in both sections. The two sections that meet this requirement are the _____ and _____.

Section G: Body Cavities

1. Label the body cavities in the diagram.
2. Why is the abdominal cavity more prone to injuries than the other cavities?
3. What separates the dorsal cavity into two subdivisions?
4. What separates the ventral cavity into two subdivisions?



5. Identify the body cavities where the following surgical procedures would occur.
 - a. Removal of the uterus. _____
 - b. Coronary bypass surgery (heart surgery). _____
 - c. Removal of a serious brain tumor. _____
 - d. A stomach ulcer operation. _____
 - e. A spinal tap to remove cerebrospinal fluid. _____
 - f. A biopsy of lung tissue. _____
 - g. Removal of a polyp on the lining of the large intestines. _____
 - h. Surgery to tack up the urinary bladder. _____

HONORS A&P

Abdominal Regions & Quadrants

- ❖ Use the links on 'Websites' under the Human A&P tab....click on the following links and practice. Links: Planes, Abdominopelvic Regions, Quadrants
- ❖ Answer these questions.
 - In which quadrant would a surgeon cut to remove the gall bladder? _____
 - In which quadrant would an acute appendicitis be felt? _____

Section H: Regional Terms

- Practice terms using blank diagrams. Label the lines with numbers and practice using a separate piece of paper.
- Create index cards with common name and regional terms. Maybe include a pic.
- Use the links on 'Websites' under the Human A&P tab....click on the 'Regional terms' links and practice.

Section I: Technology

1. How does this technology create images? Provide examples.

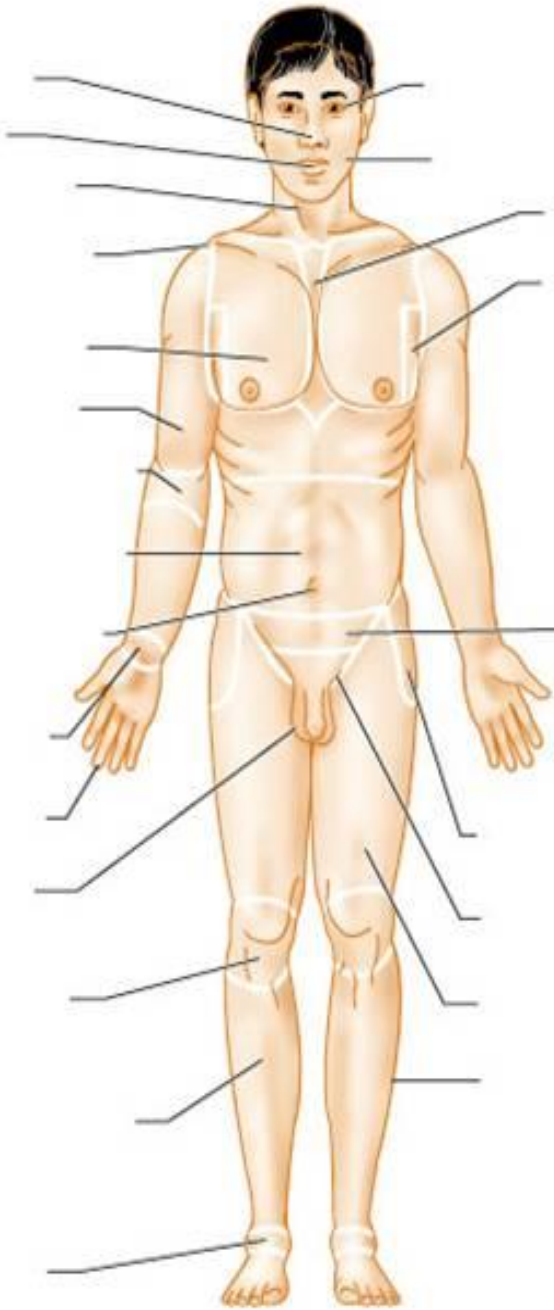
a. CT (computed tomography) – _____

b. Ultrasound (sonography) – _____

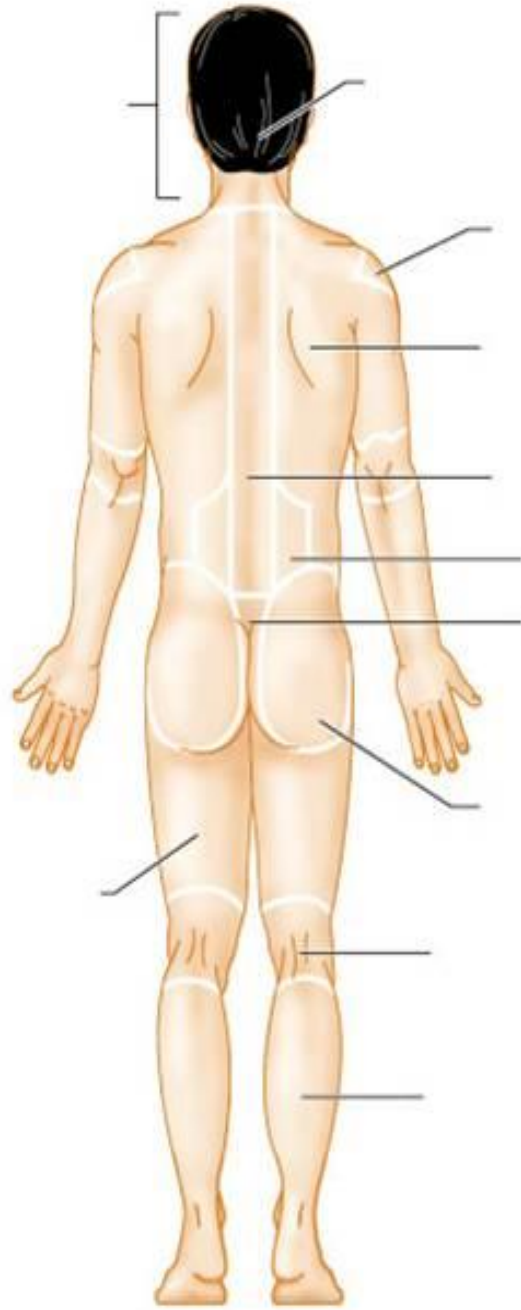
c. PET (positron emission tomography) – _____

d. MRI (magnetic resonance imaging) – _____

Regional Terms Practice Diagram



(a) Anterior



(b) Posterior

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