ANATOMICAL TERMINOLOGY: Body Planes and Sections

Planes are imaginary flat surfaces that are used to divide the body or organs into definite areas. Principal planes include: ________________, ________________, and _________________.

1. ____________________ – imaginary anatomical dividing planes
2. ____________________ – cut made through the body in the direction of a certain plane
3. ____________________ – divides the body into right and left parts
4. ____________________ – vertical cut at right angles to sagittal plane, divides the body into anterior and posterior portions
5. ____________________ – cross-section, a horizontal cut that divides the body into upper and lower parts

Identify the planes or sections on the diagram. Use the terms to indicate the plane or section.

6. Name the plane in which the entire width of the sternum may be seen. ____________________
7. Name the plane that divides the body into mirror image halves. ____________________
8. A plane that divides the forearm into proximal and distal portions is a ____________________ section.
9. A plane parallel to the midsagittal plane is a ____________________ plane.
10. A plane removing just the tip of the nose parallel to the face is a ____________________ section.
11. Looking at the cut surface of the removed nose is a ____________________ view.
12. Looking at the bottom of a brain removed from the cranium is a ____________________ view.
13. Looking at the heart from the right side of a right ____________________ view.
14. Assume a midsagittal section of the brain. When looking at the cut surface, this is a ____________________ view.
15. 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 ____________________.

Imaginary flat surfaces, or planes, can also be used to describe the various regions of the body. These planes pass through various angles of the body. Label Figure D with the correct plane described below.

16. ____________________ - separates the body into equal right and left halves
17. ____________________ - separates the body into unequal right and left halves
18. ____________________ - vertical plane that separates the body into anterior and posterior sections
19. ____________________ - divides the body into superior and inferior portions
24. Draw a kidney as it appears when sectioned in each of the three different planes.
25. Label the body planes.

26. Frontal (coronal) - ____________________________

27. Midsagittal - ____________________________

28. Sagittal - ____________________________

29. Transverse - ____________________________

30. A __________ plane divides the body into right and left halves
   a. coronal
   b. frontal
   c. transverse
   d. sagittal

31. The three major anatomical planes are
   a. parasagittal, midsagittal, and frontal
   b. sagittal, frontal, and transverse
   c. transverse, cross, and sagittal
   d. cross, frontal, and coronal
ORIENTATION TO THE BODY

ANATOMIC PLANES & SECTIONS

**MEDIAN**
The median plane is the midline longitudinal plane dividing the head and torso into right and left halves. The presence of the sectioned midline of the vertebral column and spinal cord is characteristic of this plane. The median plane is the middle sagittal (mid-sagittal) plane.

**SAGITTAL**
The sagittal plane is a longitudinal plane dividing the head and torso into left and right parts (not halves). It is parallel to the median (not medial) plane.

**CORONAL, FRONTAL**
The coronal or frontal plane is a longitudinal plane dividing the body (head, torso, limbs) or its parts into front and back halves or parts.

**TRANSVERSE, CROSS**
The transverse plane divides the body into upper and lower halves or parts (cross sections). It is perpendicular to the longitudinal planes. Transverse planes may be horizontal planes of the upright body. Transverse planes are called “axial” or “transaxial” sections/slices by radiologists.

**CN:** (1) Use your lightest colors on A-D, (2) Color a body plane in the center diagram; then color its title, related sectional view, and the sectioned body example. (3) Color everything within the dark outlines of the sectional views.

Study of the human body requires visualization of internal regions and parts. Dissection (dis, apart; sect-, cut) is the term given to preparing the body for internal inspection. One method of dissection permits consistent visual orientation by cutting the body into parts, called “sections,” along the lines of reference, called “planes.” The viewing and study of internal human structure in these planes is possible through medical imaging, such as computerized tomography (CT) and magnetic resonance imaging (MRI).
Body Planes and Directions Activity
Planes and directions are practiced using fruit and toothpicks.
Be careful with the surgical instruments. Read and follow the instructions very carefully.

Materials:
Knives
Marker
Colored toothpicks
Bananas
Rulers

Banana:
Cut the banana with a transverse plane. Stick a blue toothpick in the superior end of the banana. Place red toothpick in the most distal point on the right inferior piece. Make a 3cm midsagittal incision on the posterior inferior portion of your banana. Place a yellow toothpick at the anterior superior medial section of the banana. With a maker place a (X) on the left posterior superior lateral section on your banana.