

**PUZZLE**  
**1131 – BASIC SCIENCES - ANATOMY**  
**UNIT 1 – BASICS OF ANATOMY**

**Basic Anatomical Terminologies Logic Puzzle: Directional Term Matching**

**Scenario:**

**Total marks: 10 marks**

A medical student is performing a cadaver dissection and must orient structures using standard anatomical terminology. Key directional terms include superior/inferior, anterior/posterior, medial/lateral, proximal/distal, superficial/deep, and ipsilateral/contralateral. A labeling error has confused orientations, and the student must match each term pair to its definition, primary body plane usage, and clinical application (e.g., during surgery). Only one definition per pair, ensuring consistent anatomical position logic.

**Clues:**

1. Superior/inferior describes vertical position relative to head/feet; superior = toward head (cranial), inferior = toward feet (caudal), used in axial body descriptions.
2. Anterior/posterior refers to front/back relative to standard anatomical position (facing observer, palms forward); ventral/anterior in humans, dorsal/posterior.
3. Medial/lateral indicates position toward/away from midline; medial = closer to median plane, lateral = farther, critical for limb and organ sidedness.
4. Proximal/distal applies mainly to extremities; proximal = closer to trunk/attachment point, distal = farther, used in fracture descriptions.
5. Superficial/deep describes layers relative to skin surface; superficial = nearer skin, deep = farther/internal, key for surgical approaches and infections.
6. Ipsilateral/contralateral refers to same/opposite sides of body; ipsilateral = same side (e.g., right arm/right leg), contralateral = opposite, used in neurology/stroke effects.
7. The labeling error confuses appendicular (limb) vs. axial (trunk/head) terms, mixing proximal/distal with superior/inferior inappropriately.
8. All terms assume anatomical position: standing erect, face forward, arms at sides, palms anterior—violations reverse meanings (e.g., supine flips anterior/posterior).
9. Clinical priority: medial/lateral prevents wrong-side surgery; proximal/distal guides casting/fracture reduction.

**Question:** Match each anatomical term pair to its definition, body region application, and clinical use, and identify which term confusion most directly causes the dissection labeling error.

**Rubrics**

Criterion	Points
Key Elements	2 pts
Logical Steps	4 pts
Correct Solution	2 pts
Biological Insight	2 pts
<b>Total</b>	<b>10 pts</b>