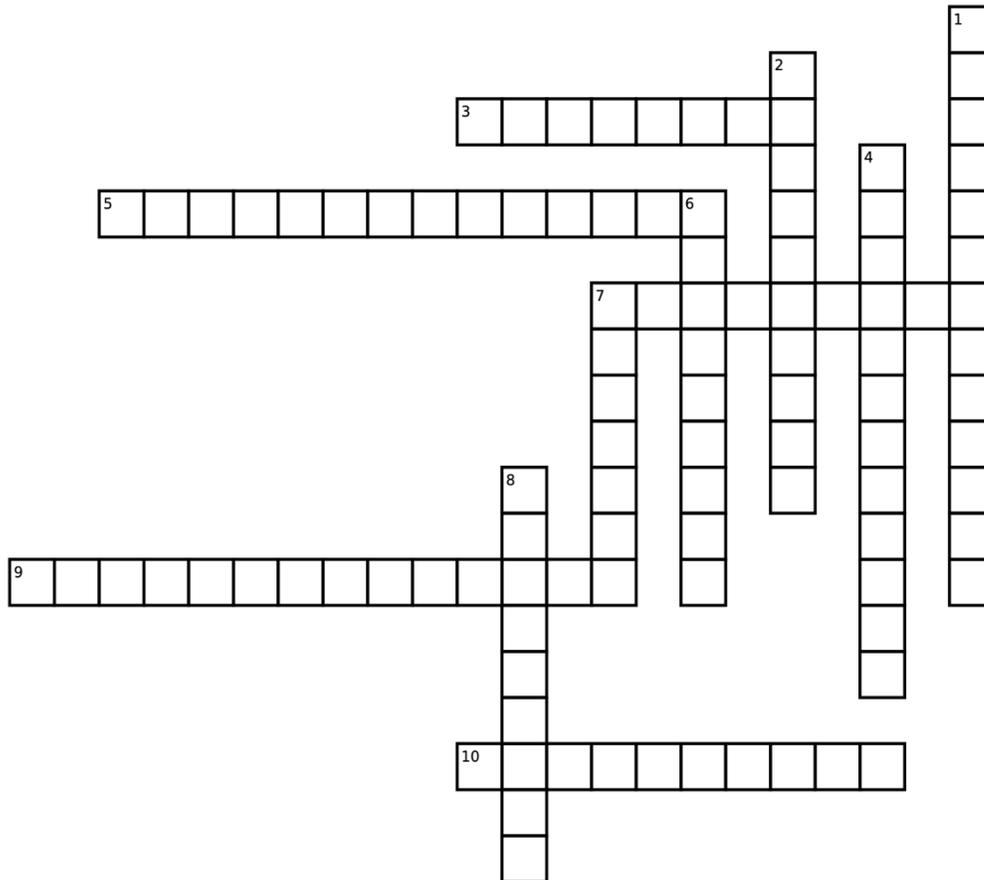


### PAL worksheet 3: Integument and Bone

1. Use this crossword puzzle to practice recall:



#### **Down**

1. The deepest layer of our epidermis
2. Fibrous membrane on the outer surface of bone
4. Move the hair follicles to make hair stand on end
6. Cavity filled with yellow marrow
7. Sweat glands that produce hypotonic sweat for thermoregulation
8. The wider sections at the end of long bones

#### **Across**

3. The only moveable bone in the skull
5. A fifth layer of cells found in "thick skin."
7. The membranous lining of the internal cavity of a long bone
9. The calcium phosphate crystals forming the hard part of our bones
10. A cell that makes new bones

2. Compare and contrast the functions and secretion compositions of eccrine and apocrine sweat glands, considering their locations and physiological roles within the body.

3. Draw a cross-section of a femur and label the following terms:

**Bone components**

Proximal epiphysis	Cortical (compact)
Distal epiphysis	Nutrient artery
Diaphysis	Yellow marrow
Medullary cavity	Articular cartilage
Epiphyseal line	Nutrient foramen
Endosteum	Cancellous (spongy) bone
Periosteum	

4. How does the microscopic structure of a long bone, such as the femur, support its primary function of providing structural support and mobility? Include concentric lamellae, trabeculae, and cortical vs. spongy bone.

5. Give two examples of each type of bone: Long, Short, Sesamoid, Irregular.

6. Draw a concept map that describes the connections on one side of the skull (cranium \_ face) bones.

Maxilla, Ethmoid, Lacrimal, Zygomatic, Palatine, Nasal, Inferior nasal conchae, Occipital, Parietal, Temporal, Frontal, Mandible, Hyoid.

Where does the cranium connect to the face?