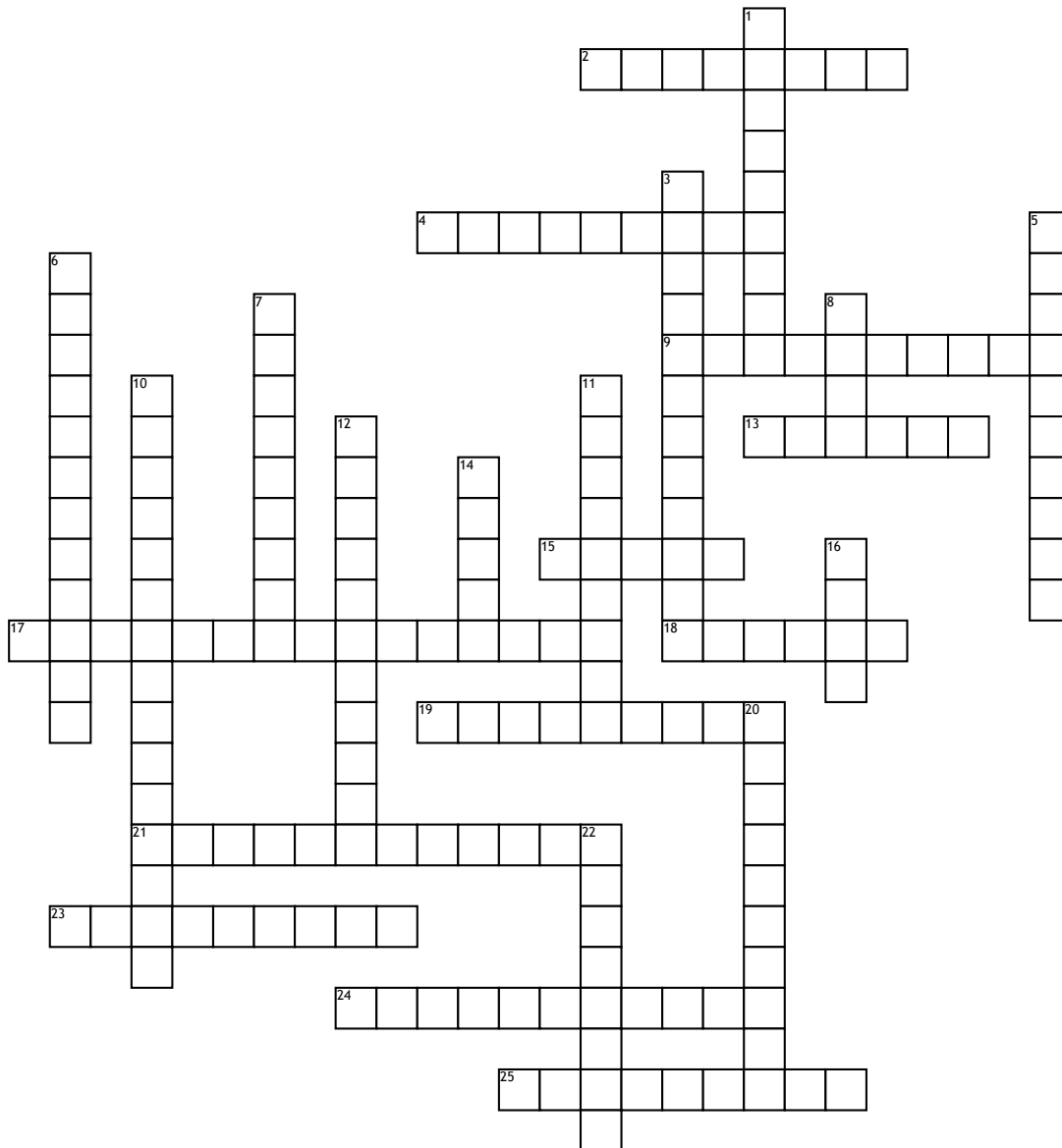


Bone formation



Across

2. The organic component of bone
4. The canal that contains the bone's nerve and blood supply and runs perpendicular to the central canal
9. Small channels that allow the movement of nutrients and waste products to and from bone cells
13. The basic functional unit of compact bone, consisting of concentric layers of compact bone surrounding a central canal
15. Bones that are almost equal in length and breadth like carpals and tarsals are known as _____ bones
17. This type of ossification takes place within the condensations of mesenchymal tissue. It is the source of flat bones and is responsible for the growth of short bones and thickening of long bones (direct mineralization of matrix)
18. A cavity found within the bone matrix that contains a bone cell
19. Thin layer of connective tissue that lines the medullary cavity

21. In this growth the tissue grows uniformly right through the whole tissue/organ
23. Hydroxyapatite is the _____ component of bone
24. _____ are responsible for the resorption (removal) of bone tissue like mineralised bone, dentine and calcified cartilage
25. The shaft of long bones is known as the _____

Down

1. The central canal that contains the bone's nerve and blood supply
3. This form of ossification is responsible for the formation of short and long bones and takes place in hyaline cartilage, which already resembles a small version of the fully-grown bone (bone deposition on pre-existing cartilage)
5. The fibrous membrane that covers the bone surface
6. In this growth new tissue is added on the surface of the existing substance

7. A mature osteoblast cell is known as a/an _____, and are responsible for maintaining bone tissue
8. Bones like the skullcap which are thin and plate-like are _____ bones
10. _____ cells are known as resting cells and can transform into either osteoblasts or osteoclasts
11. The distal and proximal ends of long bones are known as the _____
12. _____ are bone-forming cells responsible for synthesizing and depositing bone material
14. _____ bone is coarse and fibrous, arranged in a non-oriented random pattern
16. The femur, tibia, and humerus are known as _____ bones
20. The narrow part of the bone that contains the growth plate
22. Compact bone is also known as _____ bone