

# **SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES**



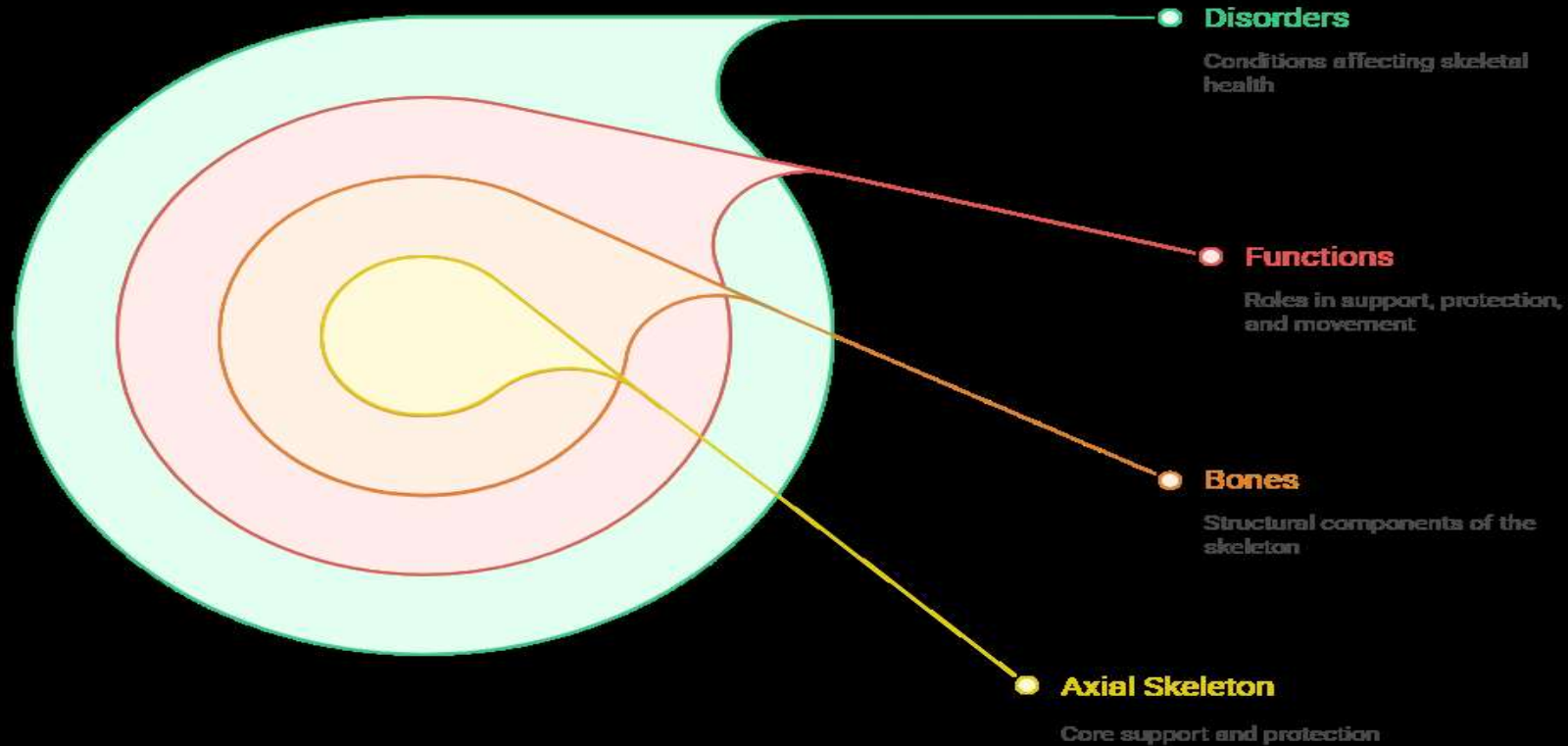
*Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai*  
*Approved by Pharmacy Council of India, New Delhi.*  
**Coimbatore -641035**

**COURSE NAME : HUMAN ANATOMY AND PHYSIOLOGY (ER20-14T)**

**I D. PHARM**

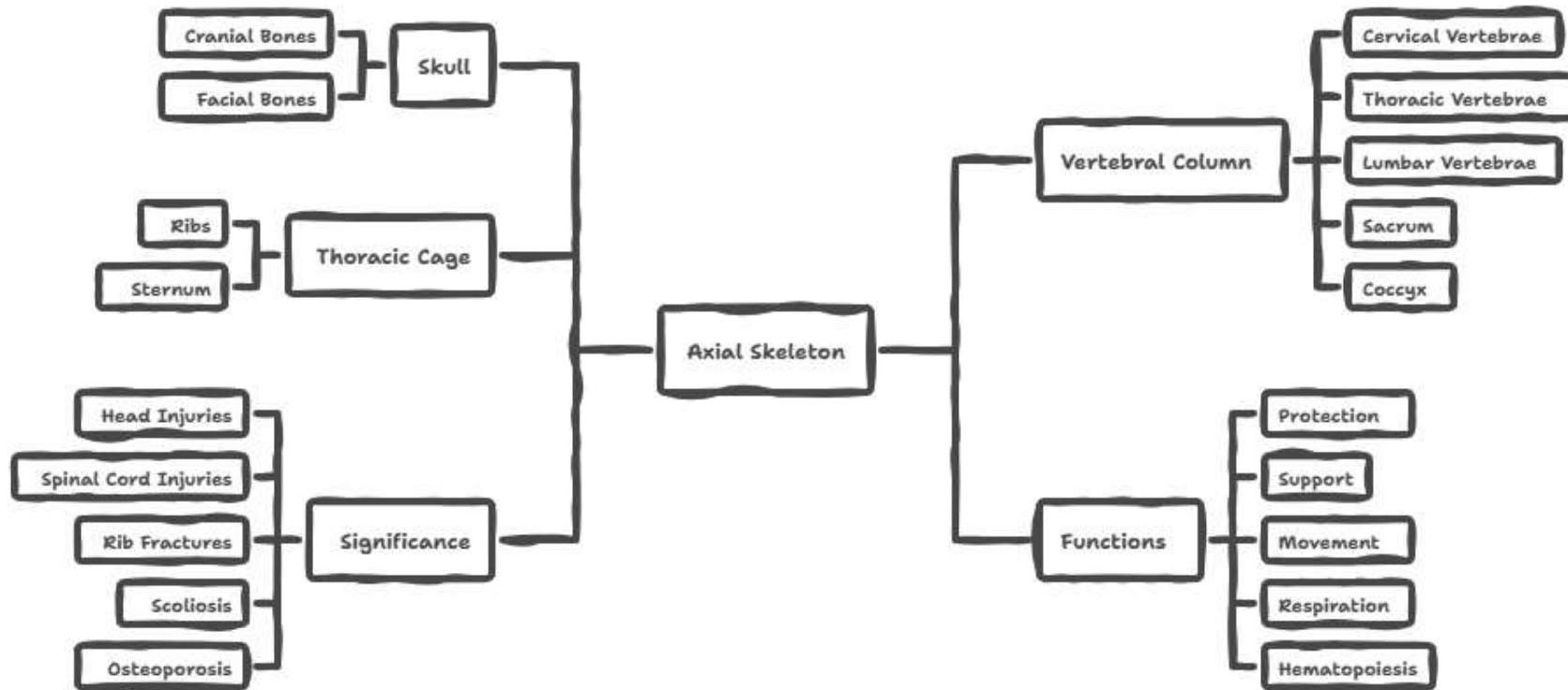
**TOPIC 1 : AXIAL SKELETON**

## MINDMAP OF AXIAL SKELETON



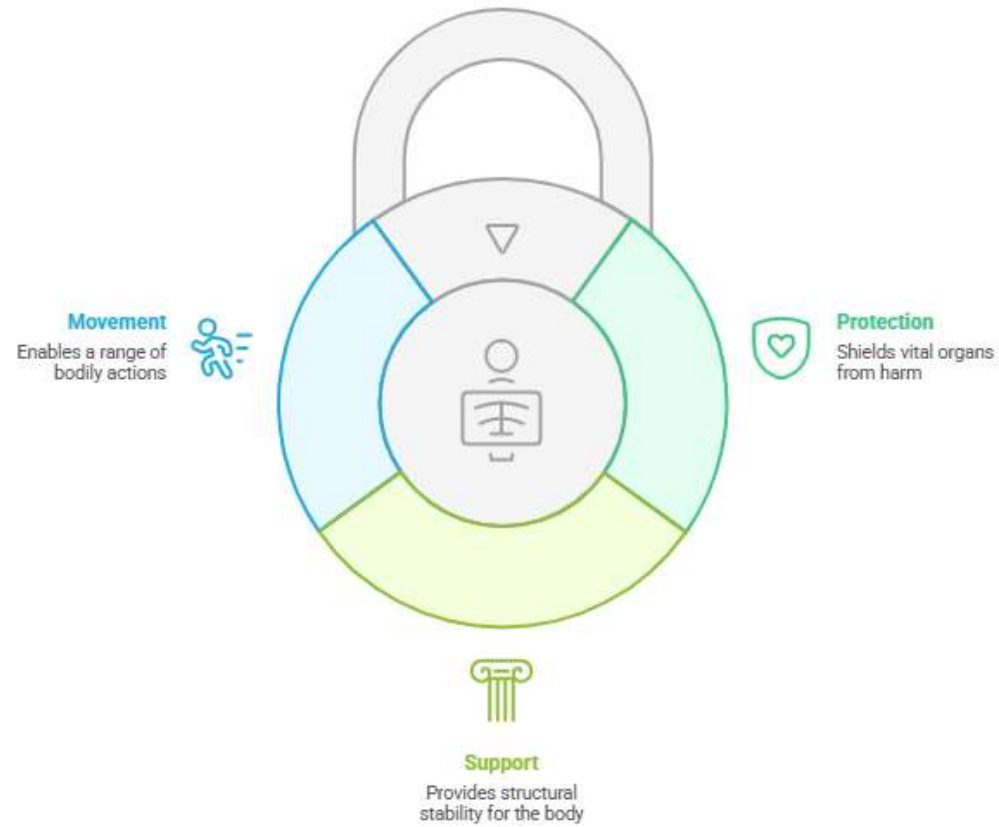
Made with Napkin

## Axial Skeleton: Structure, Functions, and Significance



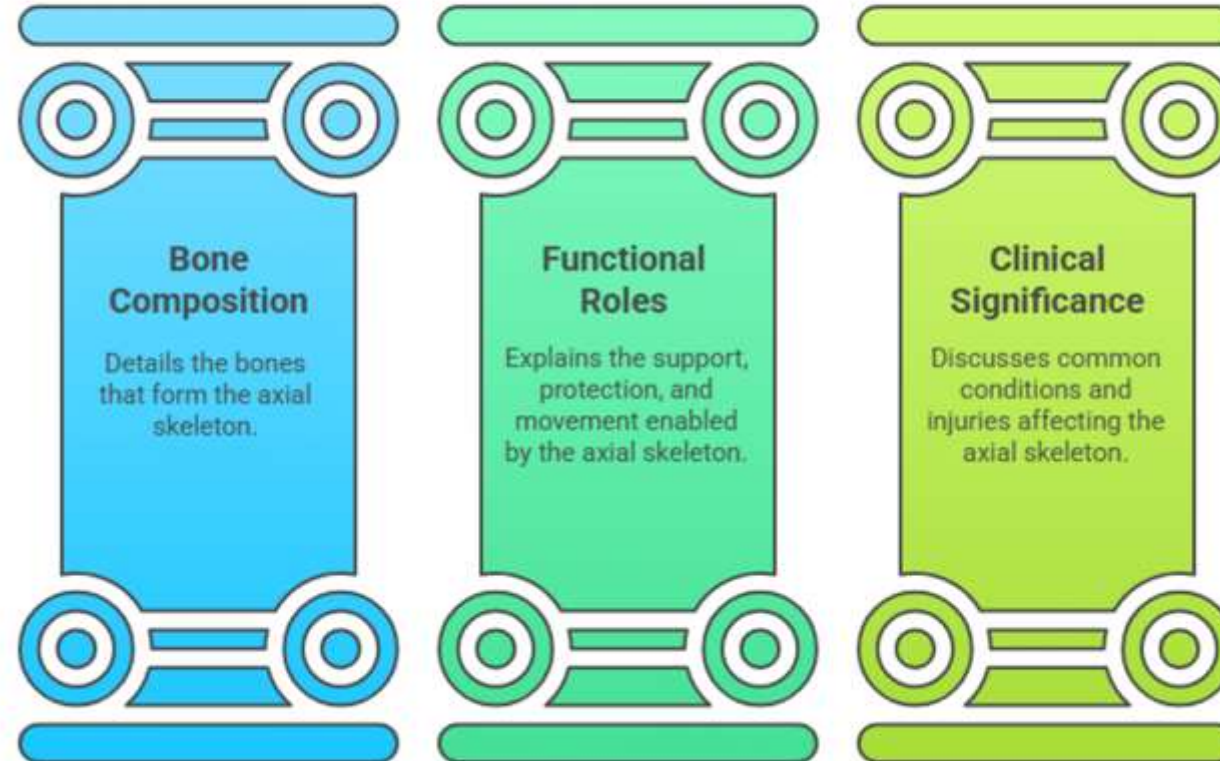
Made with  Napkin

## Foundations of the Body



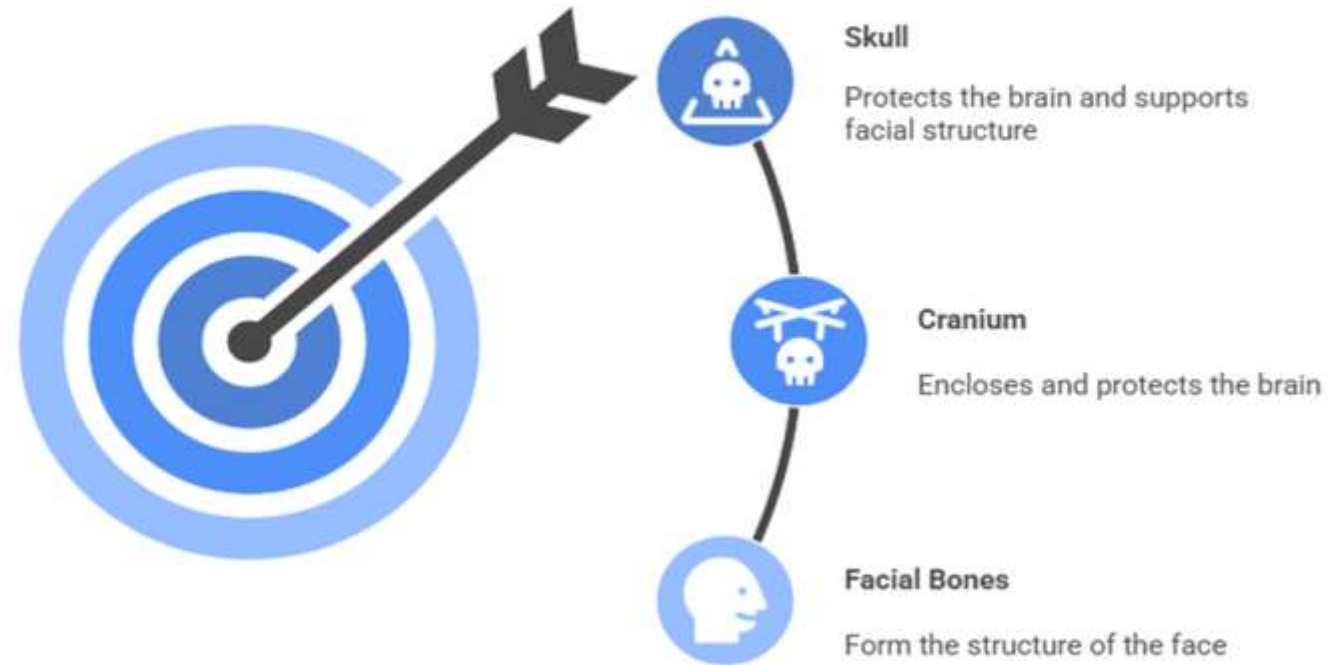
Made with Napkin

## Foundations of the Axial Skeleton



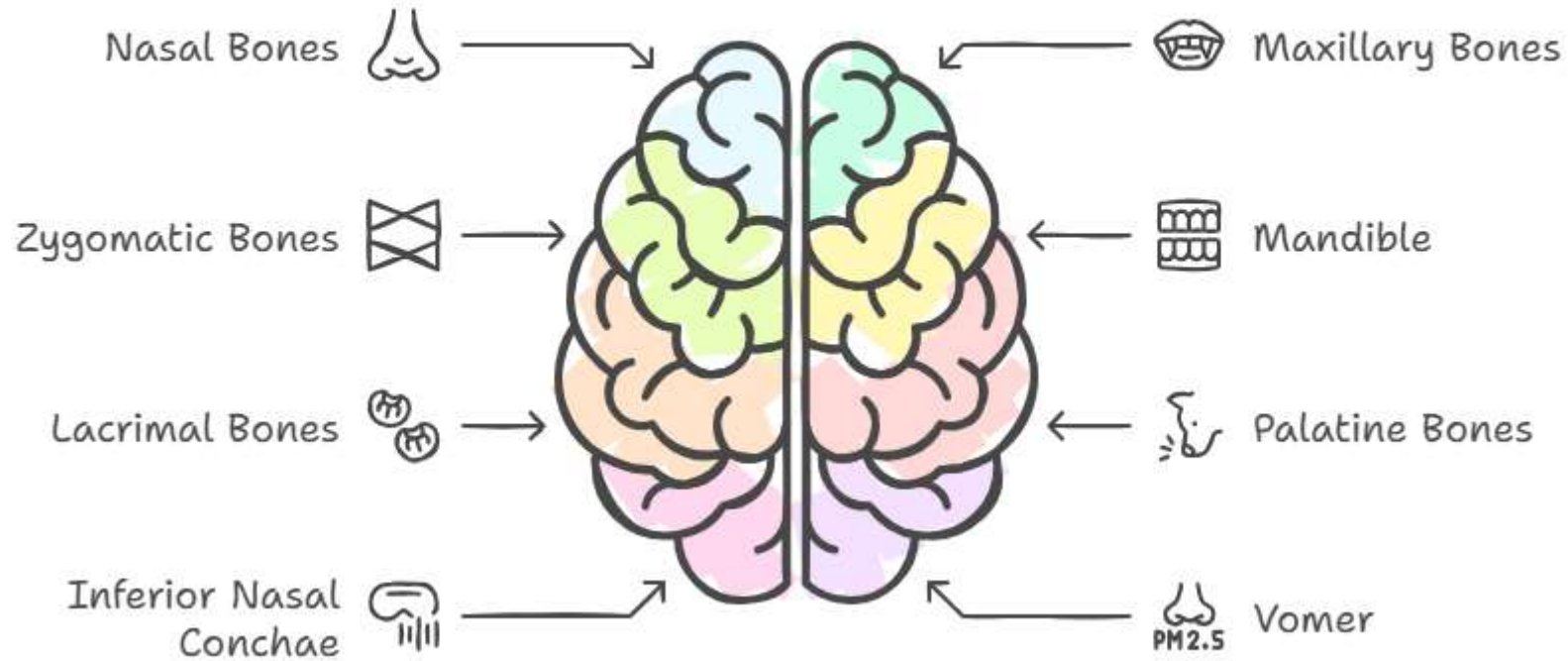
Made with  Napkin

## Skull Structure and Function



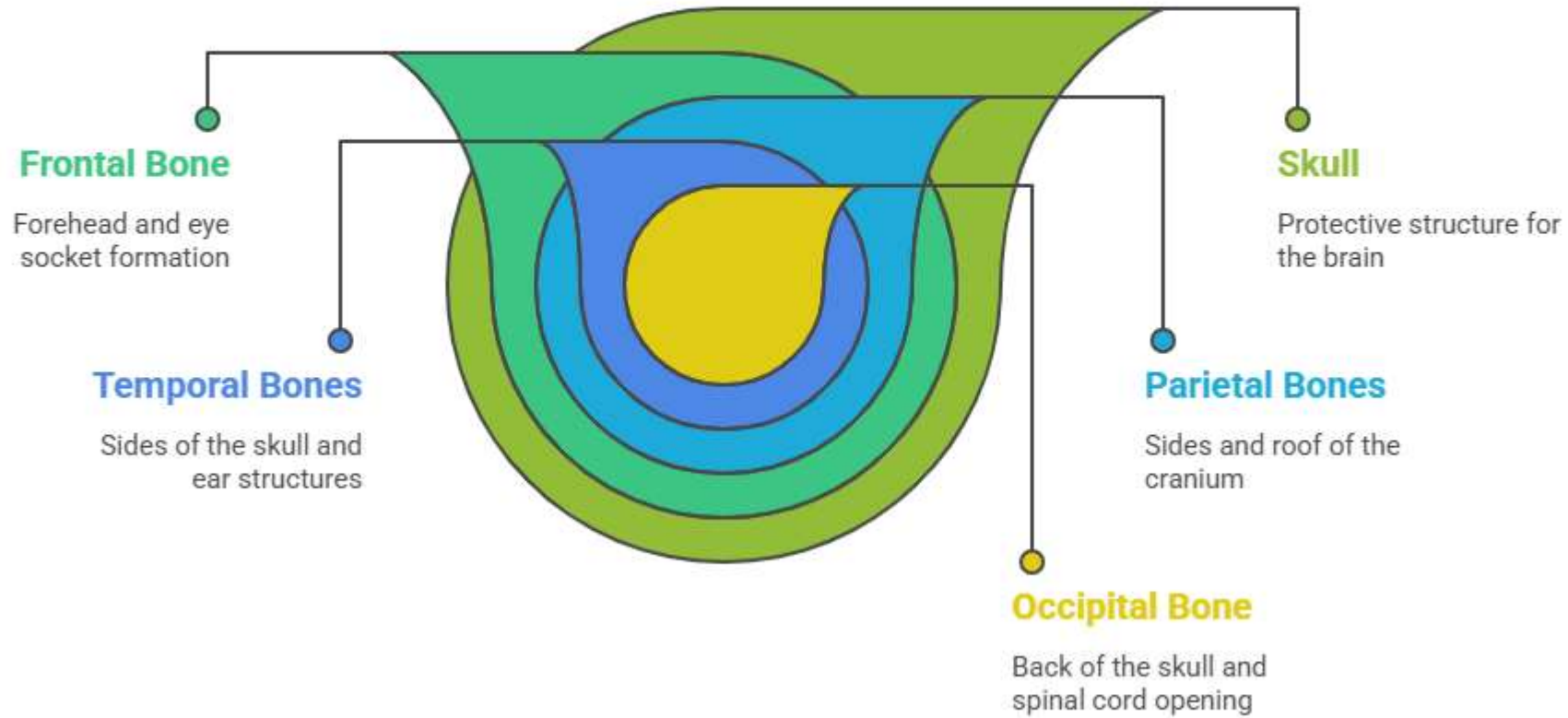
Made with  Napkin


## Bones of the Skull



Made with Napkin

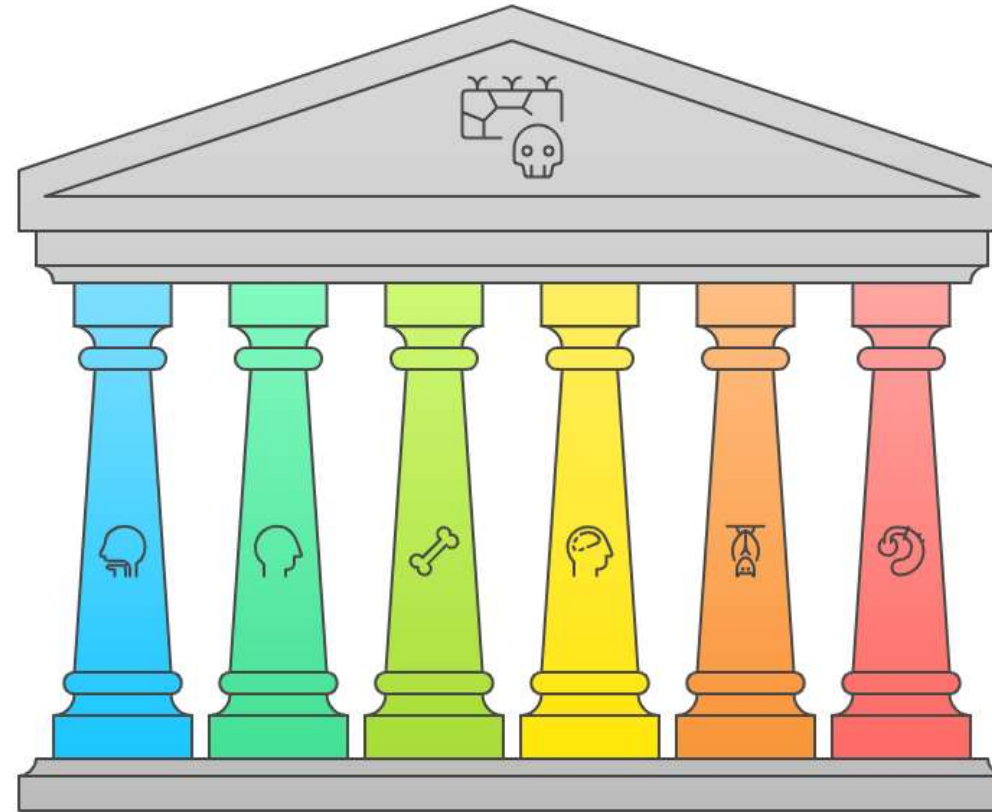
## Cranial Bones Structure



Made with  Napkin



## Cranial Bone Structure



**Frontal Bone**

Forms the forehead and upper eye sockets.

**Parietal Bones**

Form the sides and roof of the cranium.

**Temporal Bones**

Form the lower sides of the cranium and house inner ear structures.

**Occipital Bone**

Forms the posterior cranium and contains the foramen magnum.

**Sphenoid Bone**

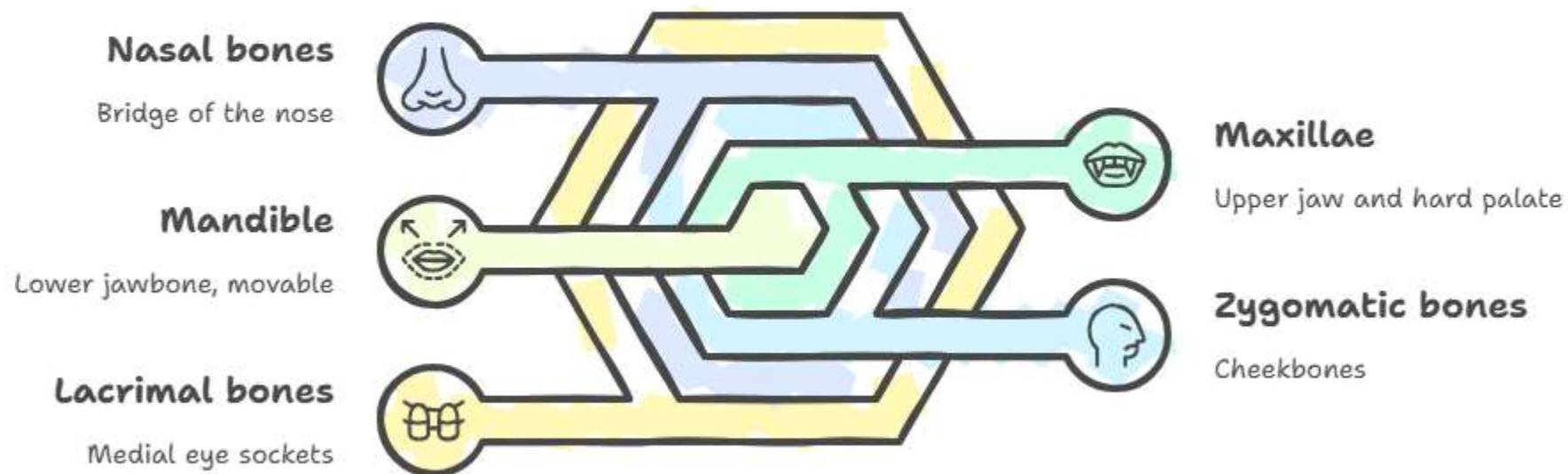
Forms part of the skull base and eye sockets.

**Ethmoid Bone**

Located between eye sockets, forming part of the nasal cavity and eye sockets.

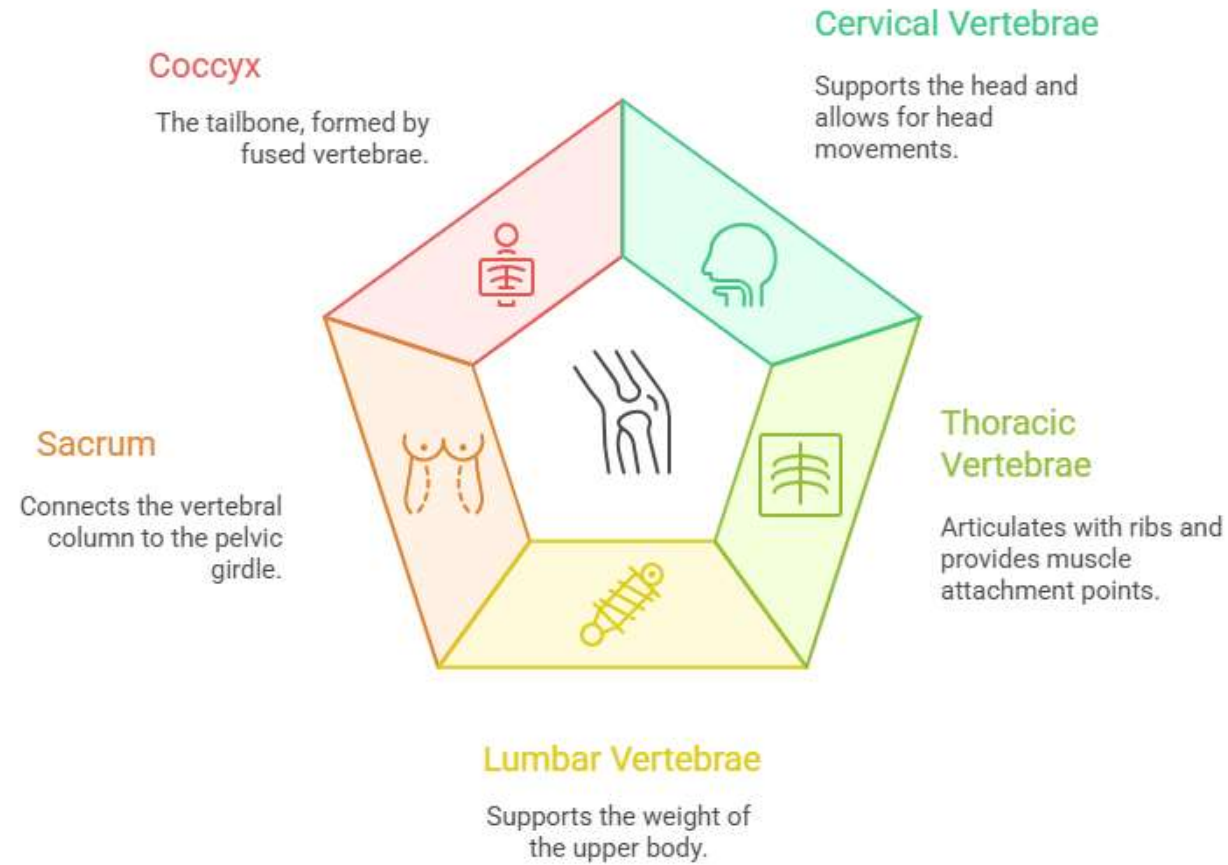
Made with  Napkin

## Facial Bones Structure



Made with  Napkin

## Structure of the Vertebral Column



Made with  Napkin

## Structure of the Vertebral Column



### **Cervical Vertebrae**

Located in the neck, allowing for head movements.



### **Thoracic Vertebrae**

Located in the chest, articulating with ribs.



### **Lumbar Vertebrae**

Located in the lower back, bearing the most weight.



### **Sacrum**

A triangular bone at the base, connecting to the pelvis.

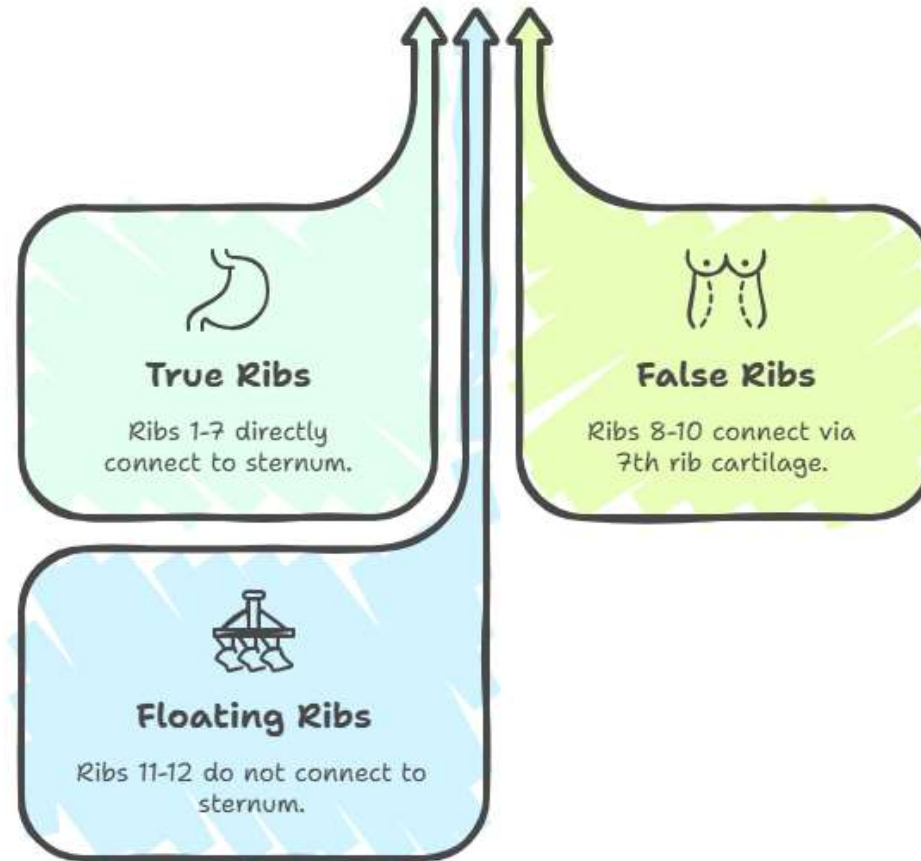


### **Coccyx**

The tailbone, located at the inferior end.

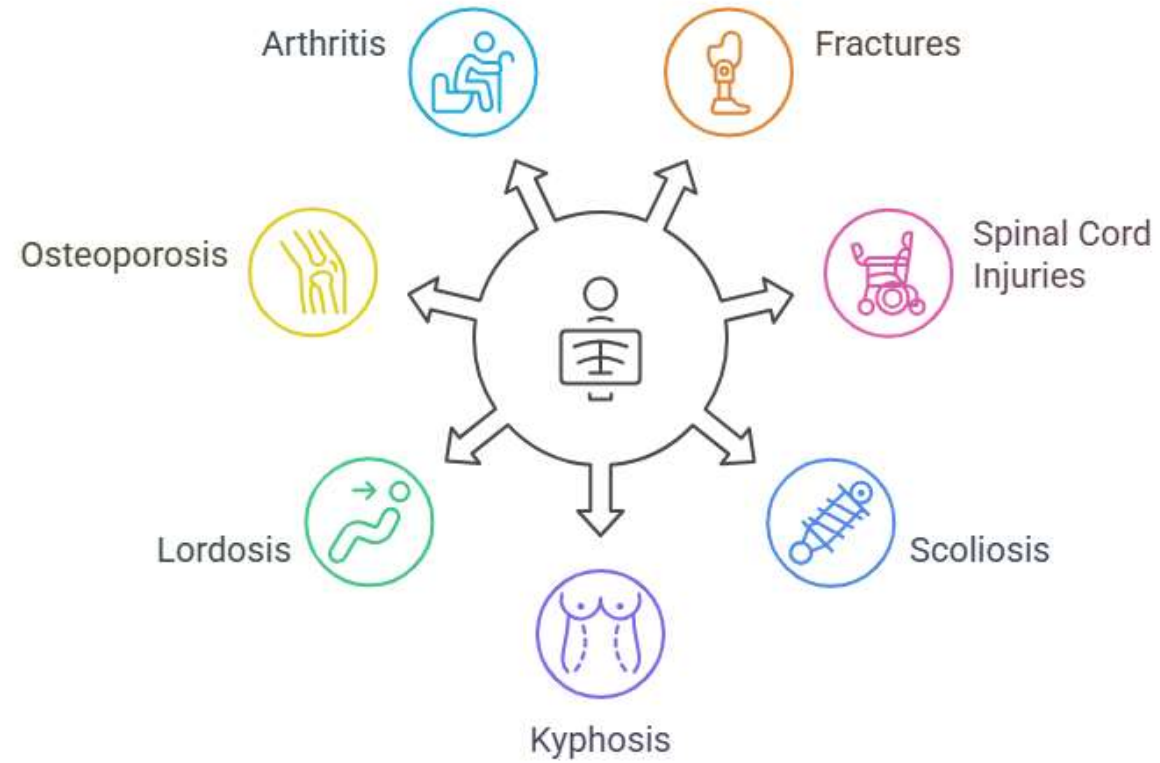
Made with  Napkin

## Rib Connections to the Sternum

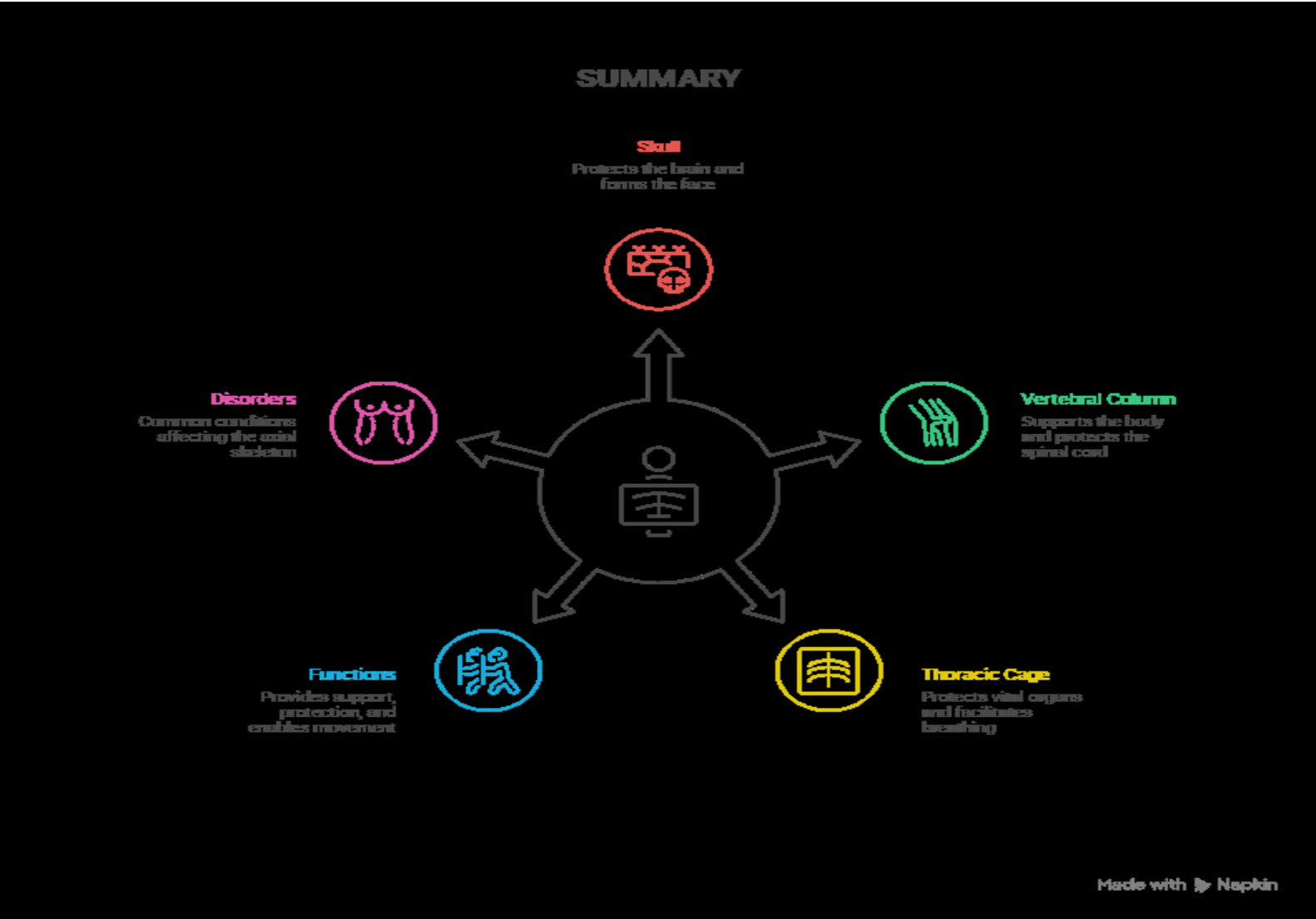


Made with Napkin

## Axial Skeleton Disorders



Made with Napkin

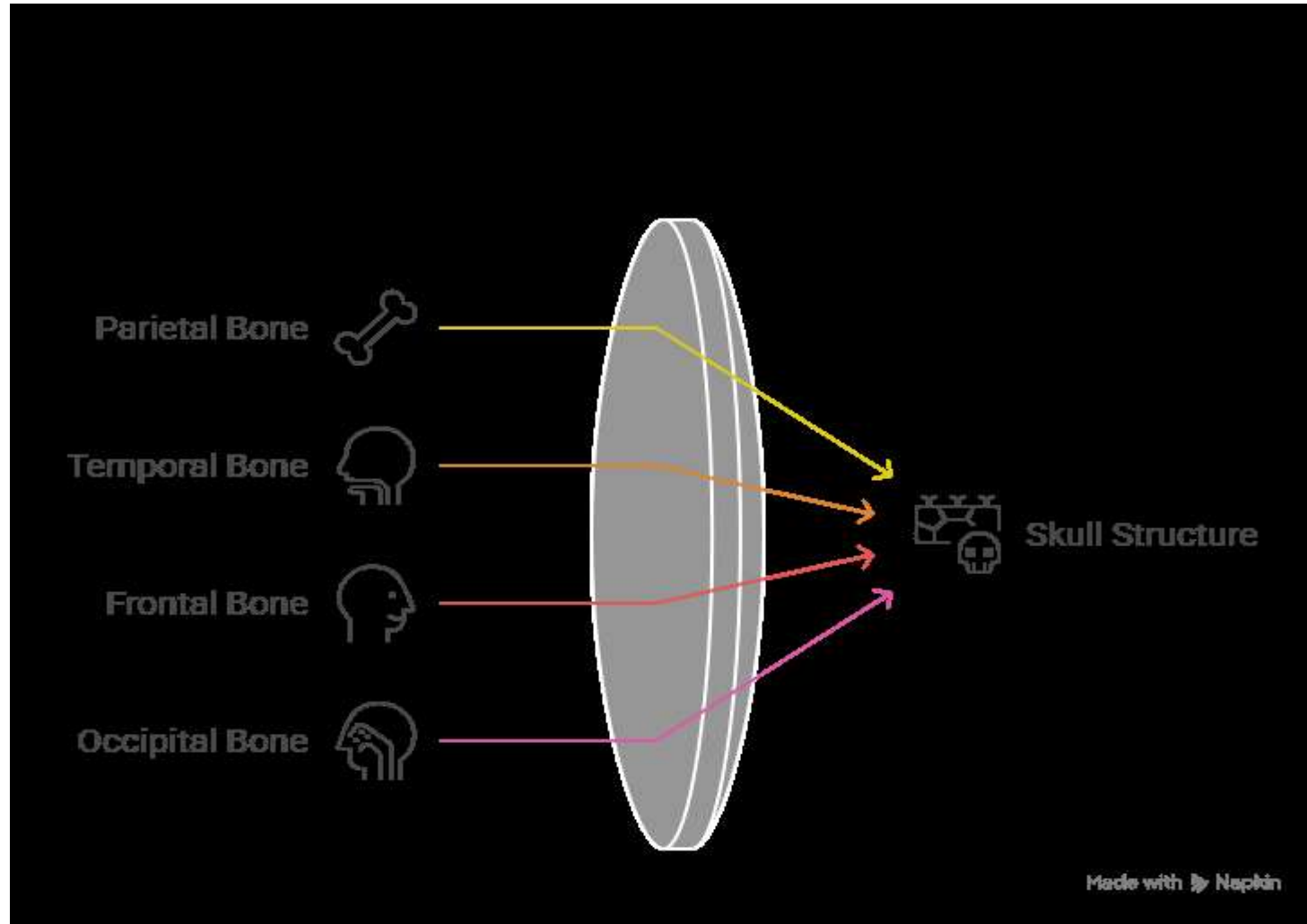


# ASSESSMENTS



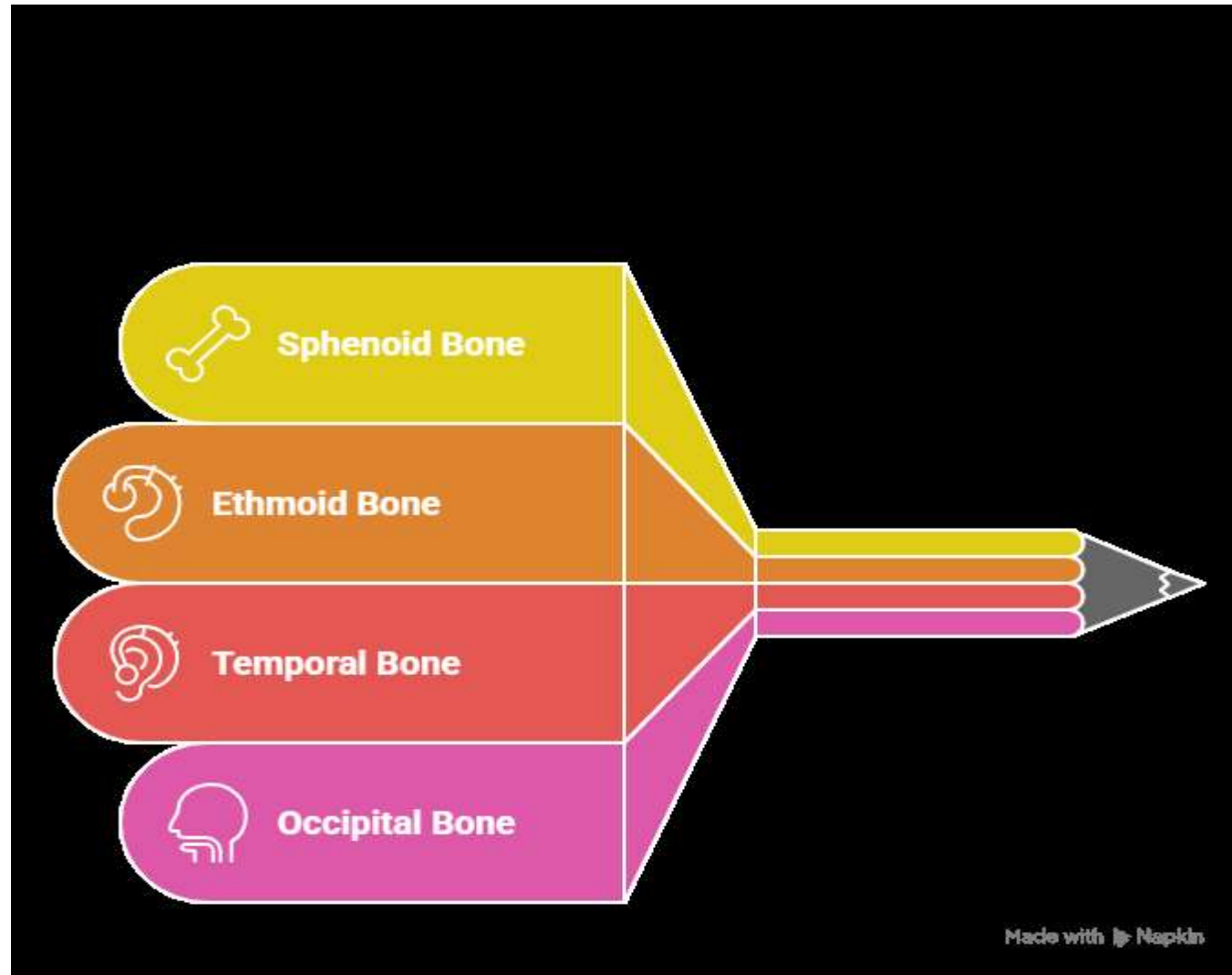
1. 3. Which bone forms the forehead?





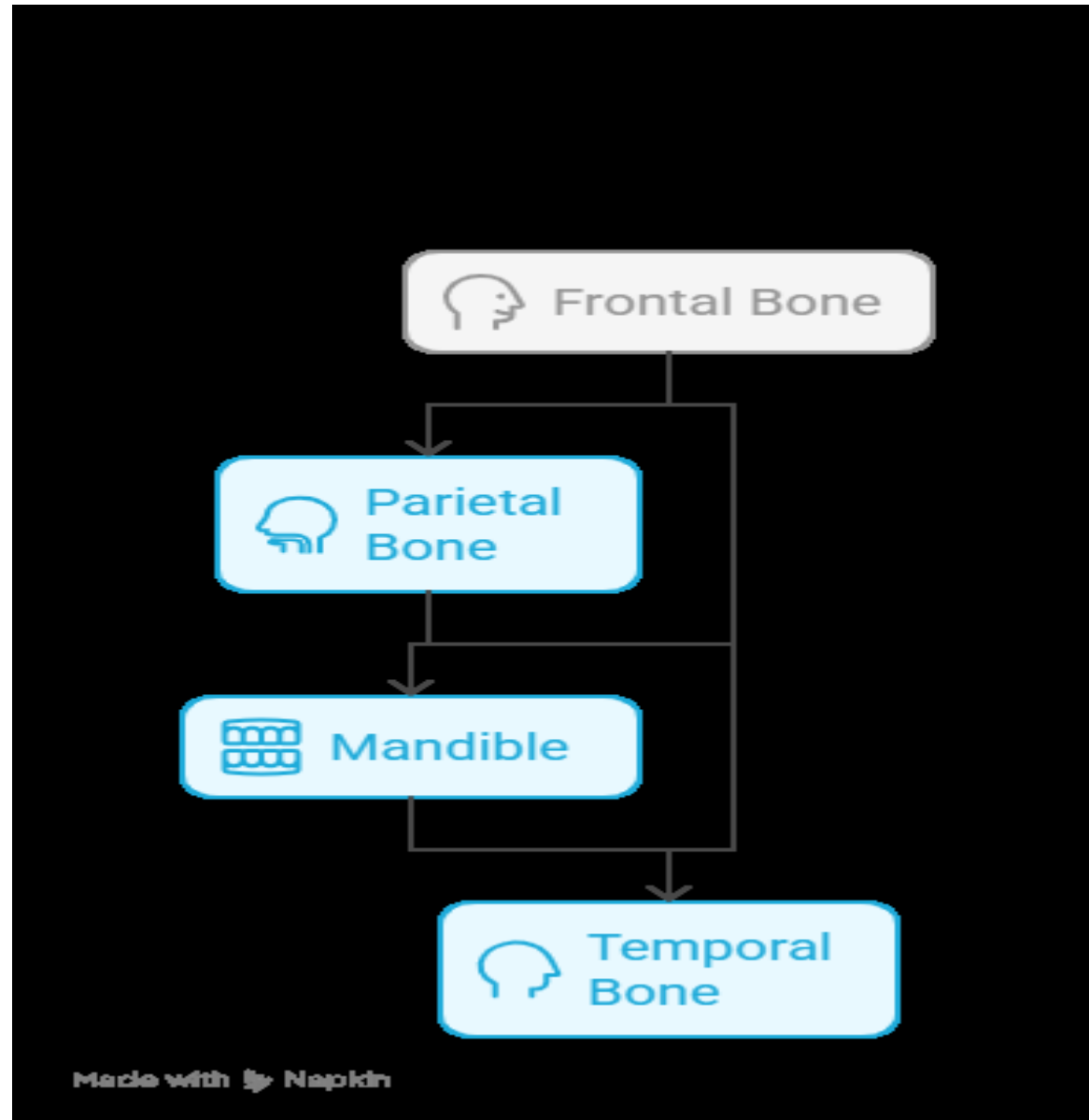
2. The foramen magnum is located in which bone?







3. Which of the following is a facial bone?



# REFERENCES

1. **Book (Standard Anatomy Textbook):**Thibodeau GA, Patton KT. **Anatomy & physiology**. 10th ed. St. Louis (MO): Mosby Elsevier; 2019. Axial skeleton; p. 195-219.
- 2.Gray H, Vogl AW, Tibbitts R, Vogl J. **Gray's anatomy: the anatomical basis of clinical practice** [Internet]. 42nd ed. Philadelphia: Elsevier; 2021. [cited 2025 Dec 13]. Available from: [<https://www.elsevier.com/books/grays-anatomy/gray/978-0702077050>]
- 3.Hasegawa K, Okamoto M, Hatsushikano S, Shimoda H, Ono M, Homma T, et al. Standing sagittal alignment of the whole axial skeleton with reference to the gravity line in humans. **J Orthop Sci**. 2017;22(3):397-404.
- 4.Doyle L, Matz S. The human axial skeleton: an overview of structure and function. **Anat Res Int**. 2022;2022:9876543.
- 5.National Cancer Institute. SEER Training Modules: Axial Skeleton (80 bones) [Internet]. Bethesda (MD): National Institutes of Health; [updated 2024 Nov 21; cited 2025 Dec 13]. Available from: [<https://training.seer.cancer.gov/anatomy/skeletal/divisions/axial.html>](<https://training.seer.cancer.gov/anatomy/skeletal/divisions/axial.html>).

