

Module 5 L02

Skull: Cranial Bones

Dr. Lisa Brinn

lbrinn@fiu.edu

2. The Skull

- The skull contains two sets of bones:

- **Cranial bones**

- 8 form the cranial cavity

- Paired:

- Parietal
- Temporal

- Unpaired:

- Frontal
- Occipital
- Sphenoid
- Ethmoid

- **Facial bones**

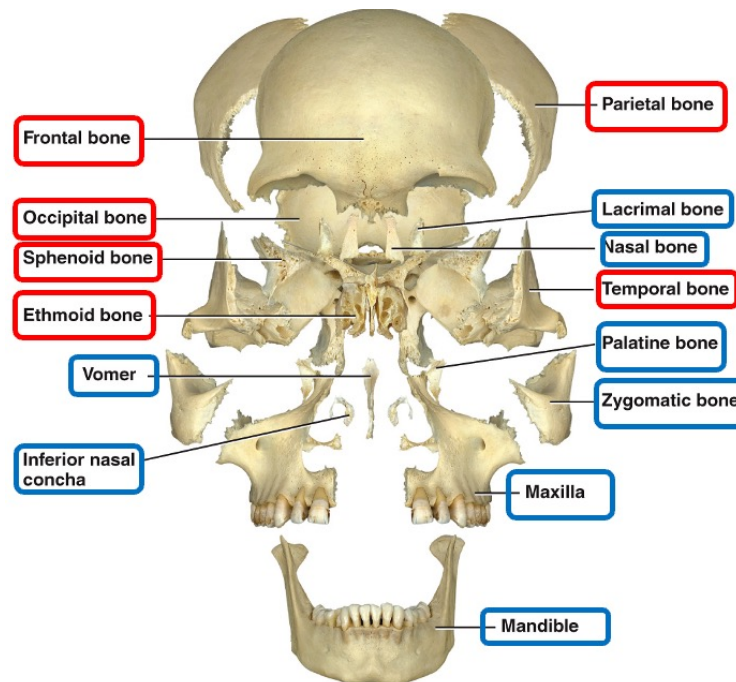
- 14 form the face

- Paired:

- Nasal
- Lacrimal
- Palatine
- Zygomatic
- Maxilla
- Inferior nasal conchae

- Unpaired:

- Vomer
- Mandible

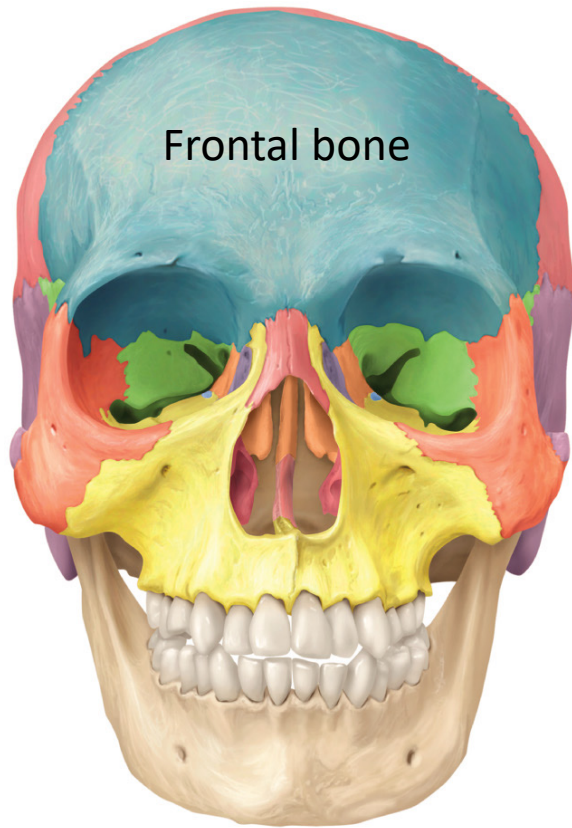


Anterior view of disarticulated skull

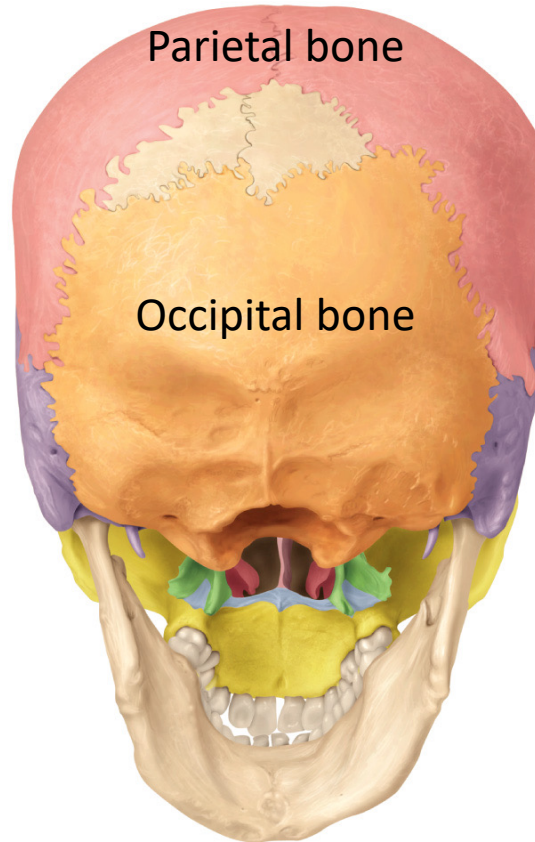
Functions of Cranial Bones

1. Brain protection
2. Stabilization – inner surfaces attach to meninges
3. Muscle attachment – outer surfaces
 - Move the head
 - Facial expressions
4. Provide protection and support
 - Digestive and respiratory systems
 - Special senses organs

Cranial Bones

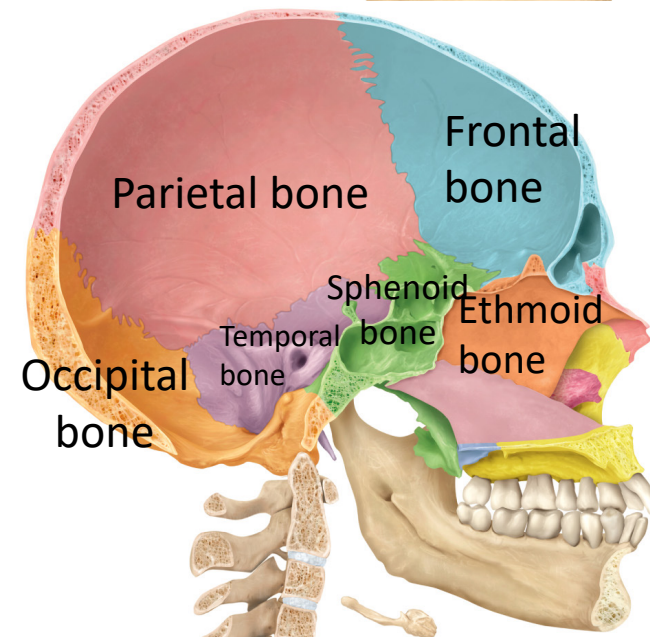
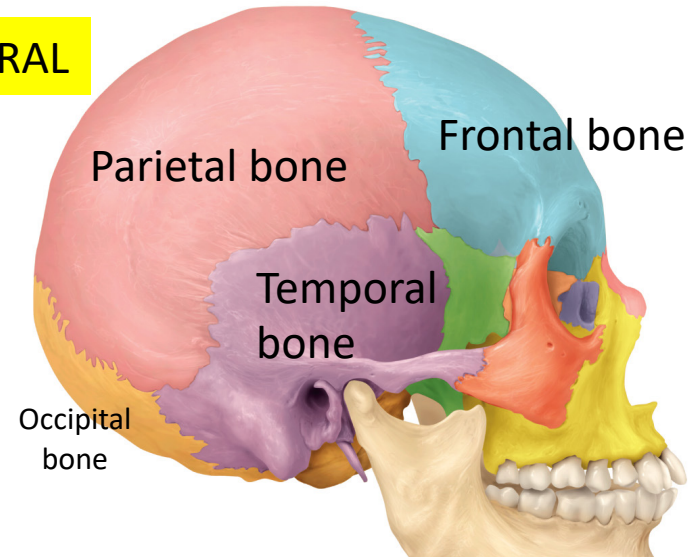


ANTERIOR



POSTEROINFERIOR

LATERAL

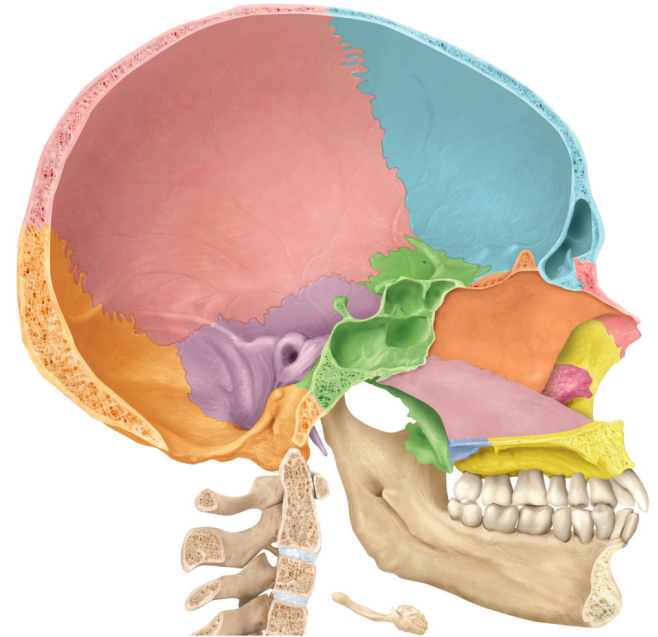


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courtesy of freepik.com

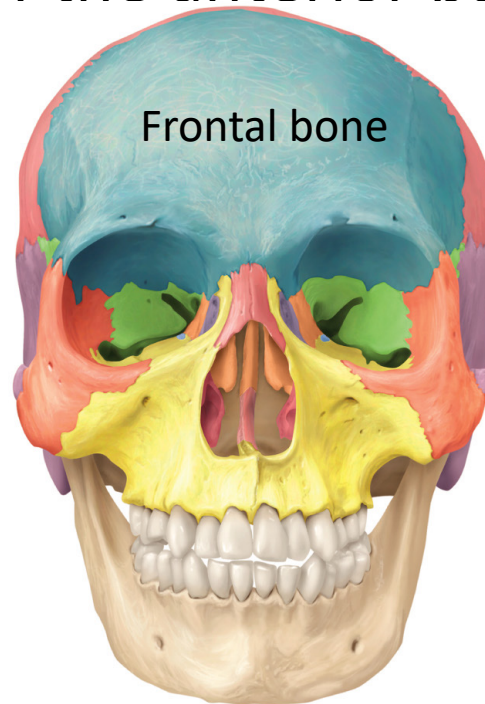
General Features of the Skull

- Cavities
 - Houses the brain
 - Smaller cavities
 - Nasal cavity
 - Orbits
- Bones of the skull
 - Small cavities
 - Paranasal sinuses
 - Middle and inner ear (temporal bone)
- Movable bones
 - Auditory ossicles
 - Occipital bone
 - Mandible



Frontal Bone Forms Facial 'Icons'

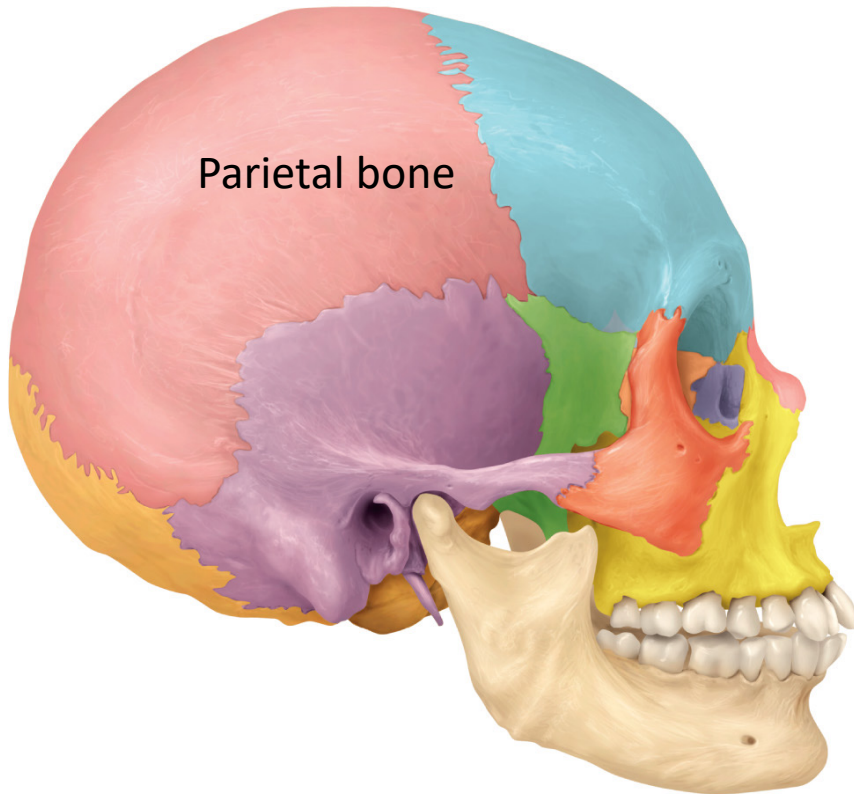
- Forehead
- Eye socket (superior part)
- Also forms much of the anterior part of the cranial floor



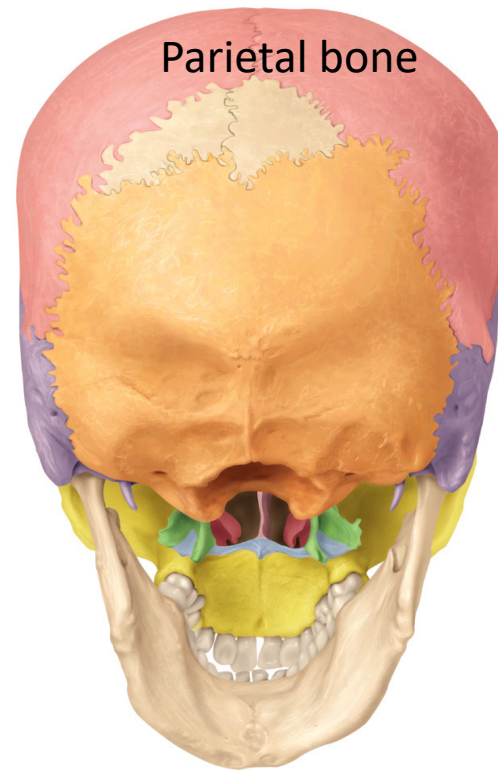
ANTERIOR

Parietal Bones

- Form much of the sides and roof of the cranial cavity
- Bone features: External surfaces are convex.



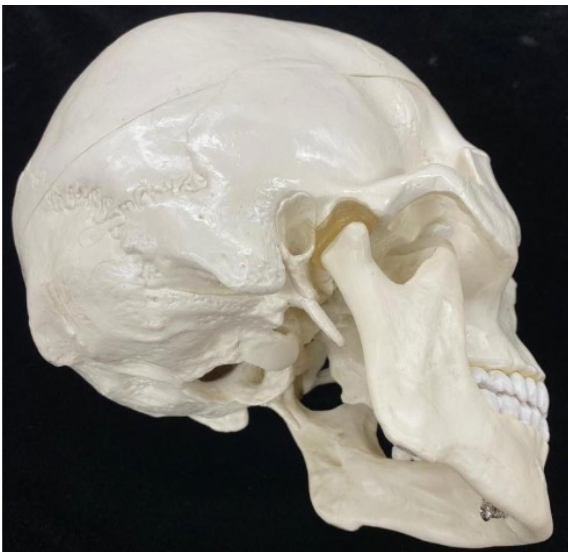
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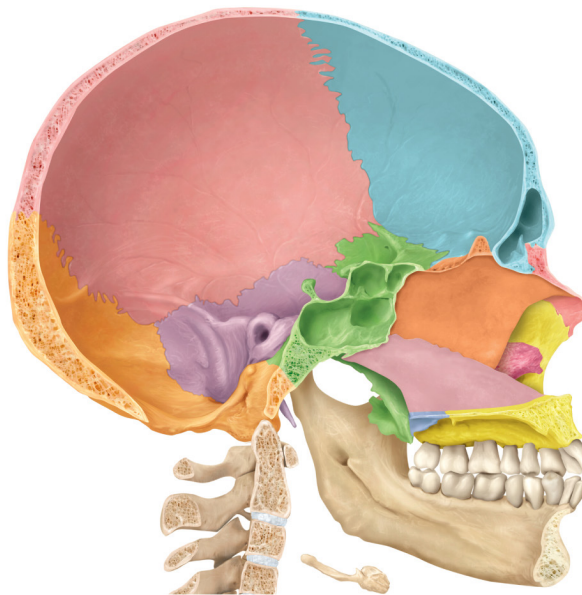
POSTEROINFERIOR

Temporal Bones

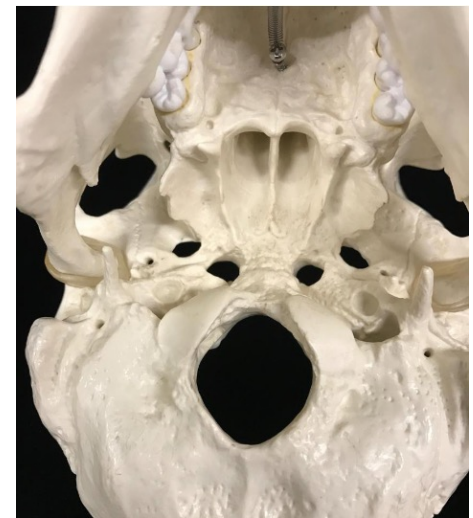
- Form the inferior lateral part of the cranial floor plus part of the lateral wall near the ear
- Bone features: zygomatic process, mandibular fossa, mastoid process, carotid canal, styloid process, external and internal acoustic meatus



LATERAL



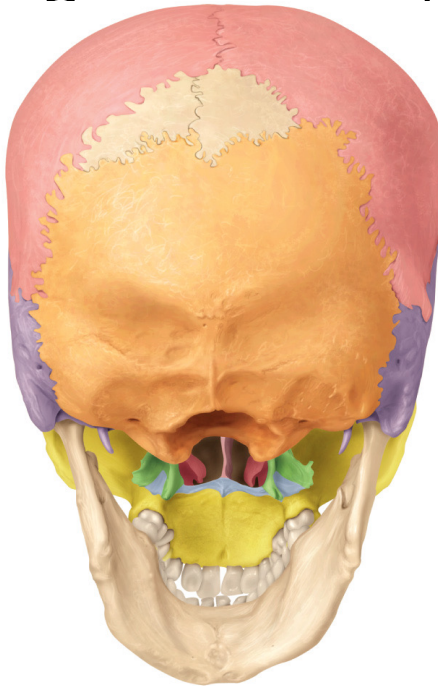
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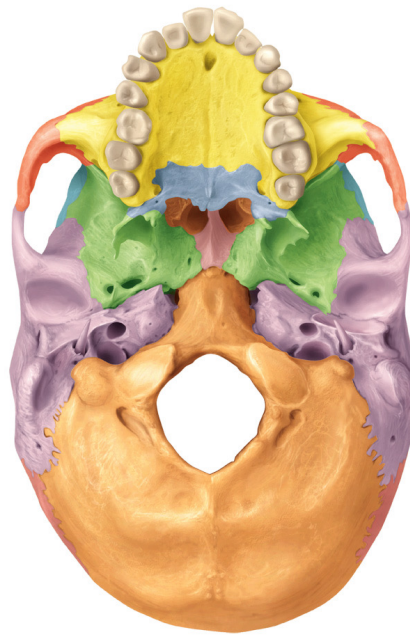
INFERIOR

Occipital Bone

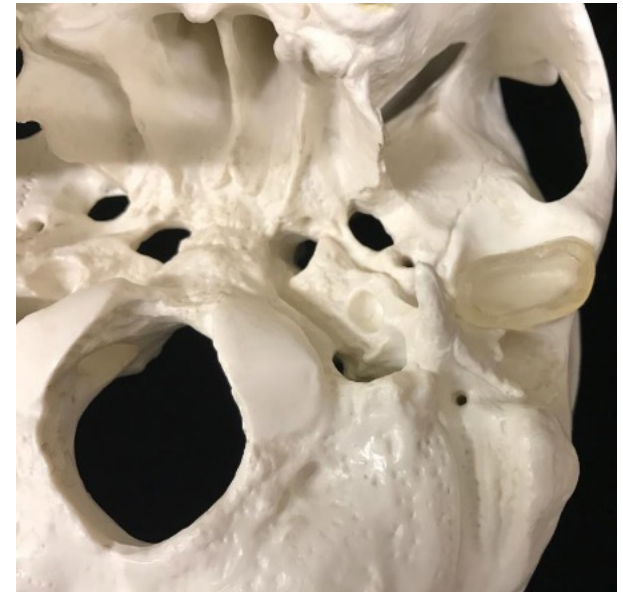
- Forms much of the posterior wall and the posterior floor of the cranial cavity
- Bone features: foramen magnum, occipital condyles, hypoglossal canal, jugular foramen



POSTEROINFERIOR



INFERIOR



INFERIOR-LATERAL

Sphenoid Bone

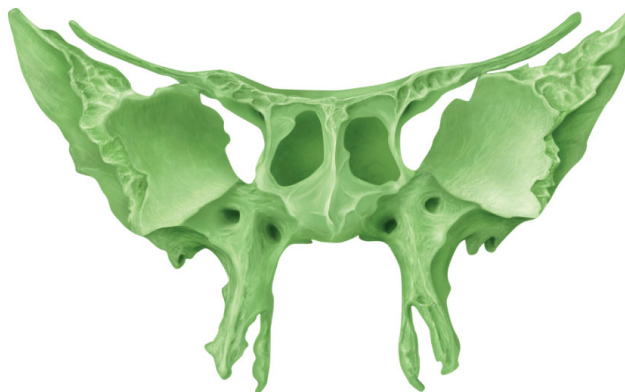
- Called “keystone” of cranial floor
 - Articulates with all other cranial bones, providing considerable stability to the skull
- Has a complex shape resembling a butterfly
- Bone features: sella turcica, optic canal, superior orbital fissure, inferior orbital fissure, foramen rotundum, foramen ovale, foramen spinosum



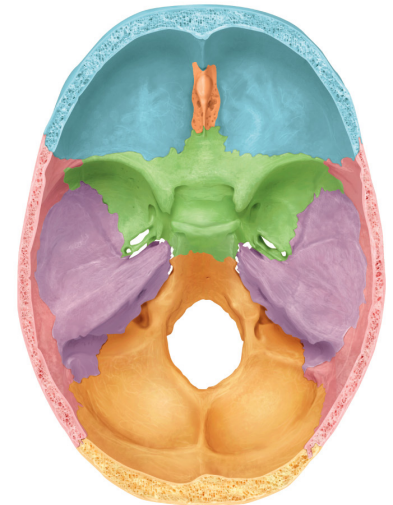
ANTEROLATERAL



ANTERIOR

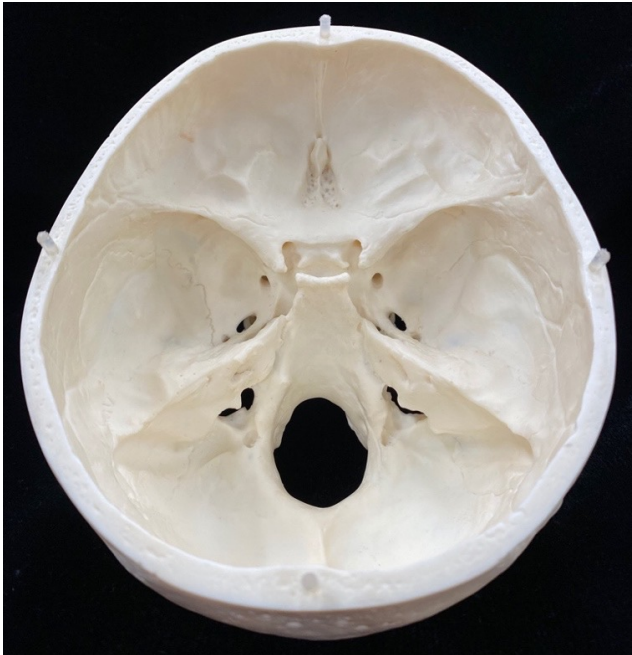


ANTERIOR

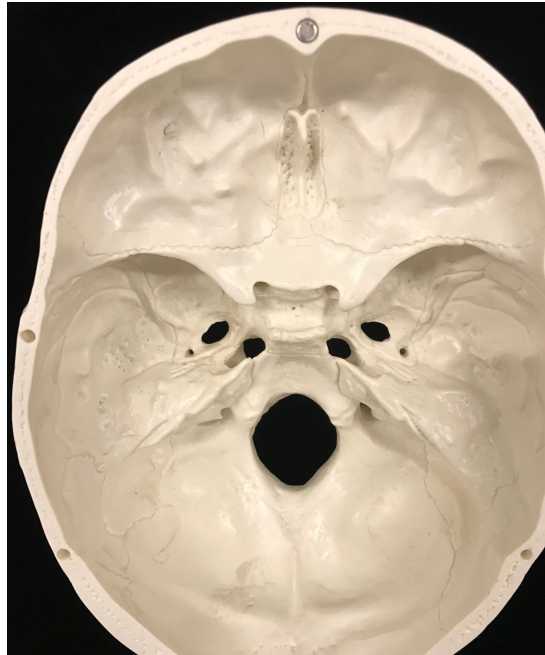


SUPERIOR

Sphenoid Foramina



SUPERIOR



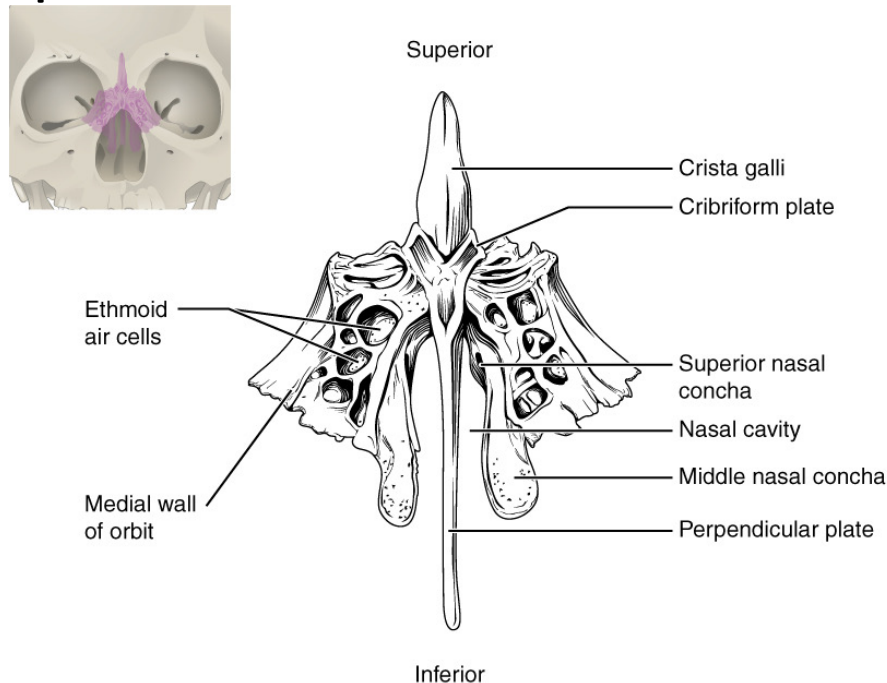
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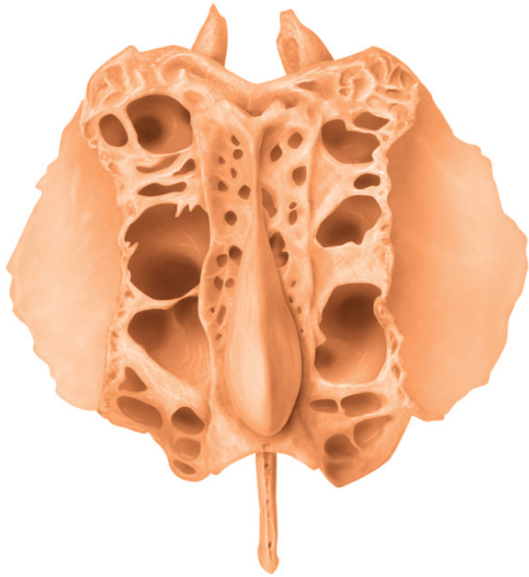
INFERIOR

Ethmoid Bone

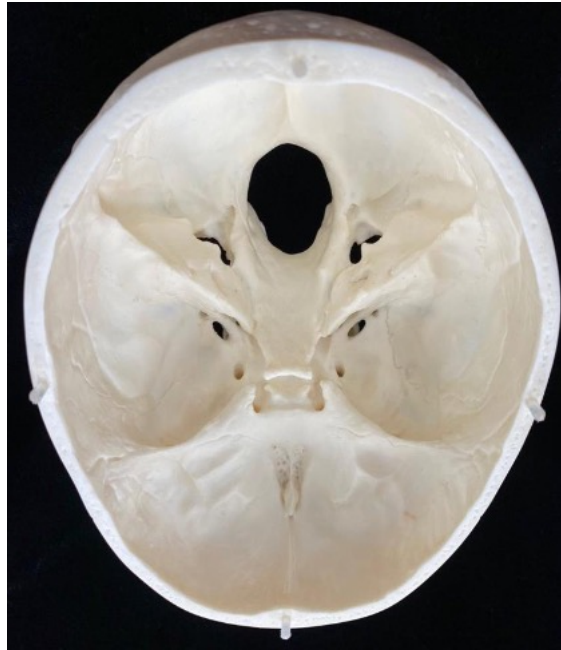
- Anterior to sphenoid and posterior to nasal bones
- Major superior supporting structure of nasal cavity
- Bone features – perpendicular plate, cribriform plate, crista galli, superior and middle nasal conchae



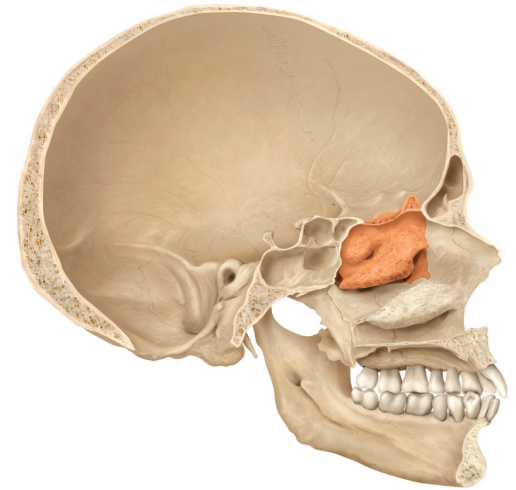
Bone Features of Ethmoid Bone



SUPERIOR



SUPERIOR



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