

The Islamic University College of Medical Technologies

Department of Radiology Technologies

First Stage

Lecture five: The skull

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# The skull

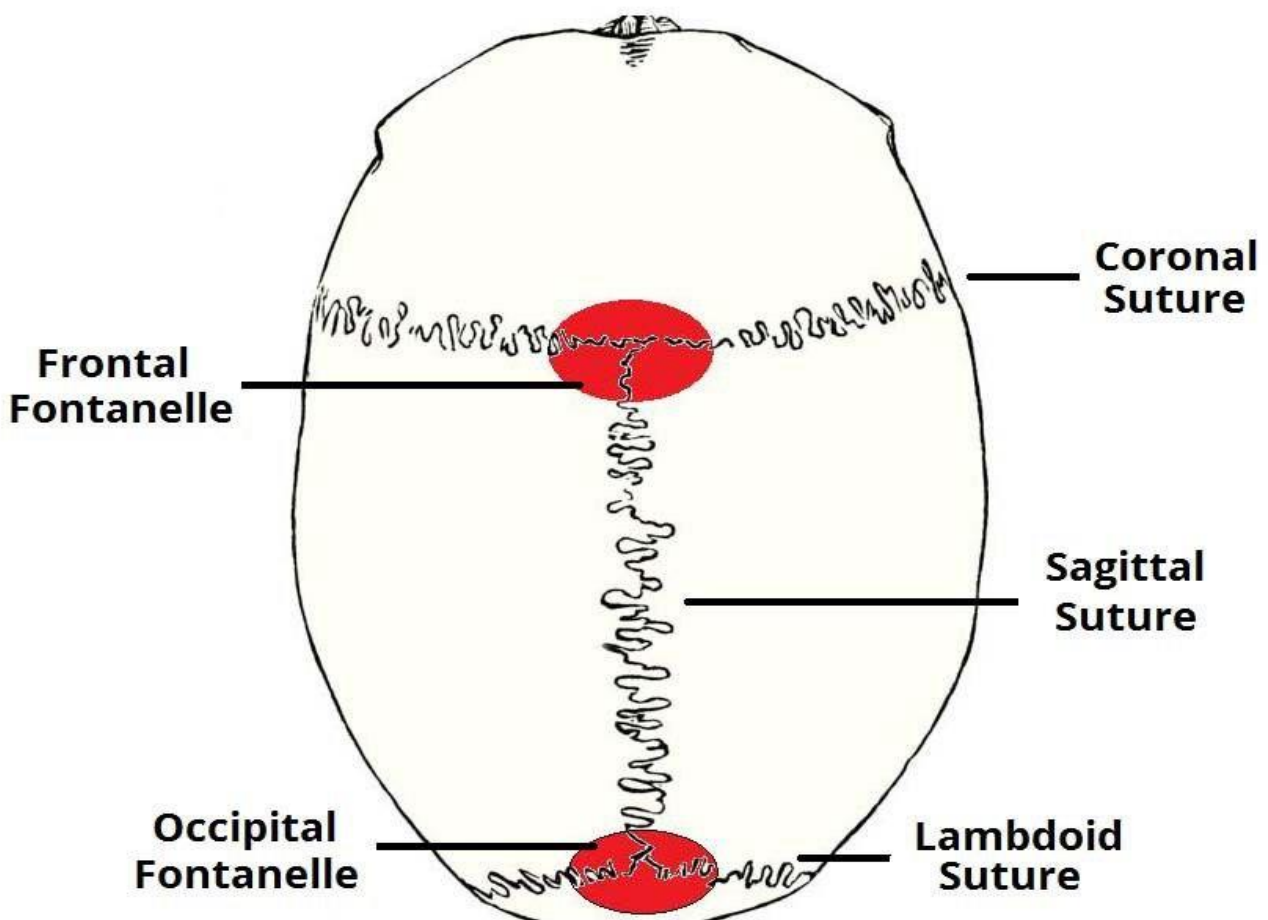


## The skull

The skull has (22) bones and formed of 2 sets of bones (cranium) and (face). All these bones are connected at immobile joints called **sutures** except the mandible which is connected to the skull by freely movable joint.

Sutures: The sutures of the skull, also referred to as the cranial sutures, are fibrous joints that connect the bones of the skull.

- 1.coronal suture.
- 2.sagittal suture.
- 3.lambdoid suture.



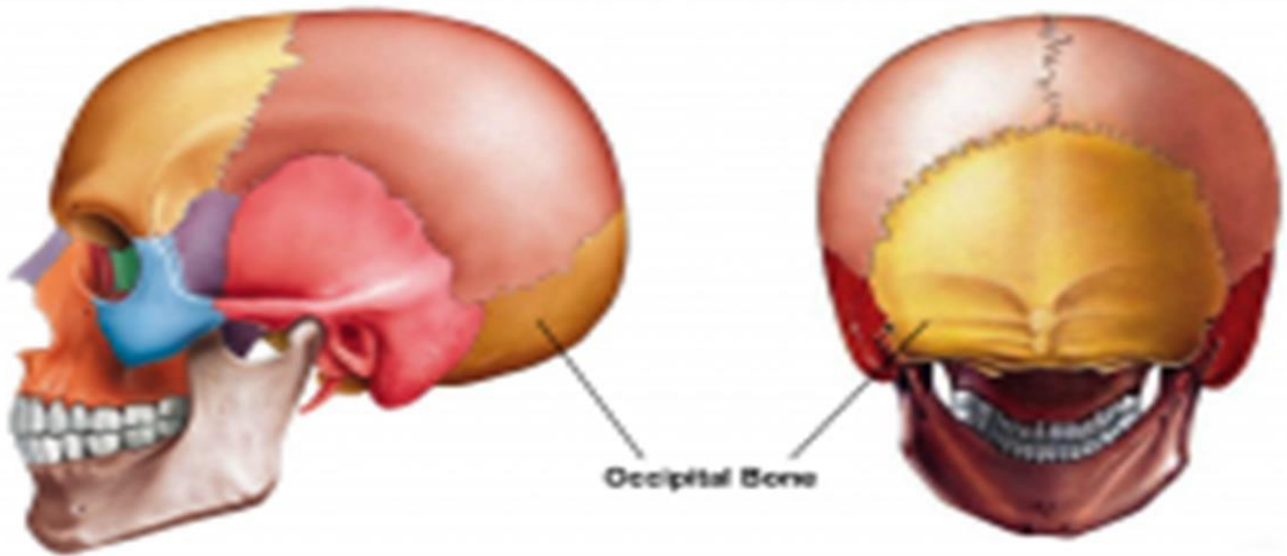
Bones of the cranium:

### Single bones:

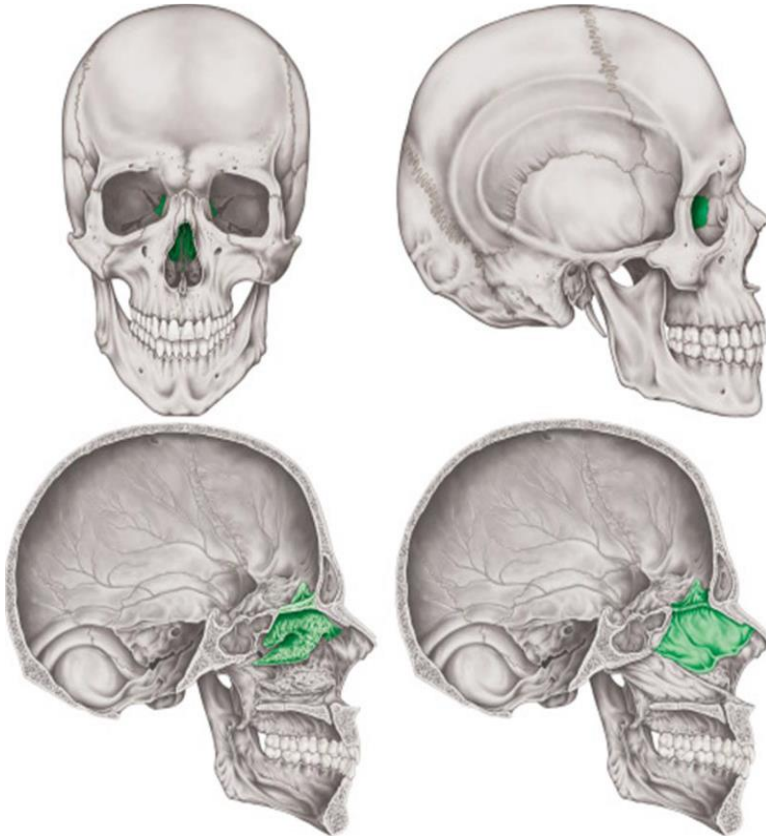
1. Frontal bone: The frontal bone in an adult is **an unpaired bone that is a part of the boney structure that forms the anterior and superior portions of the skull.**



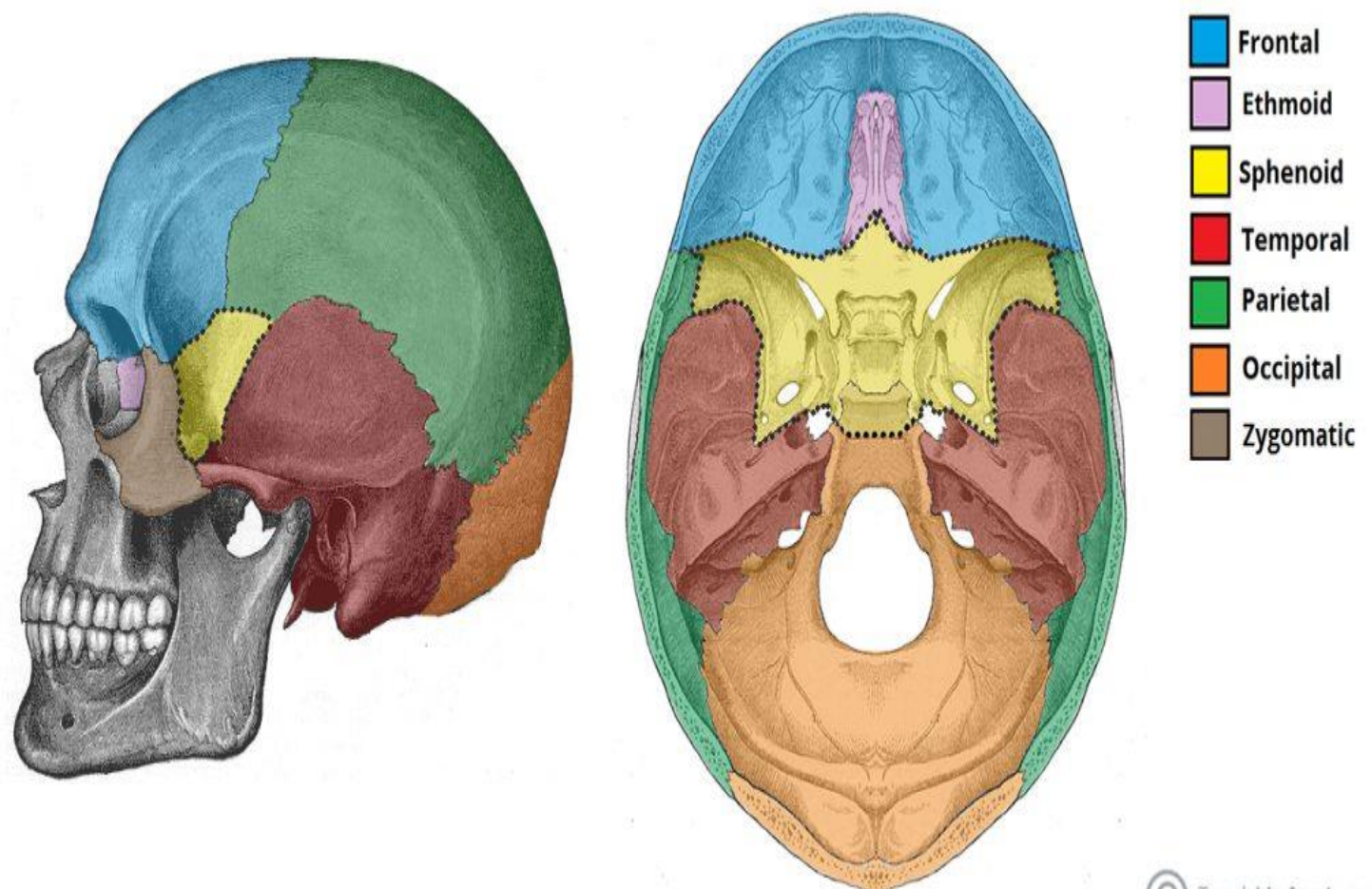
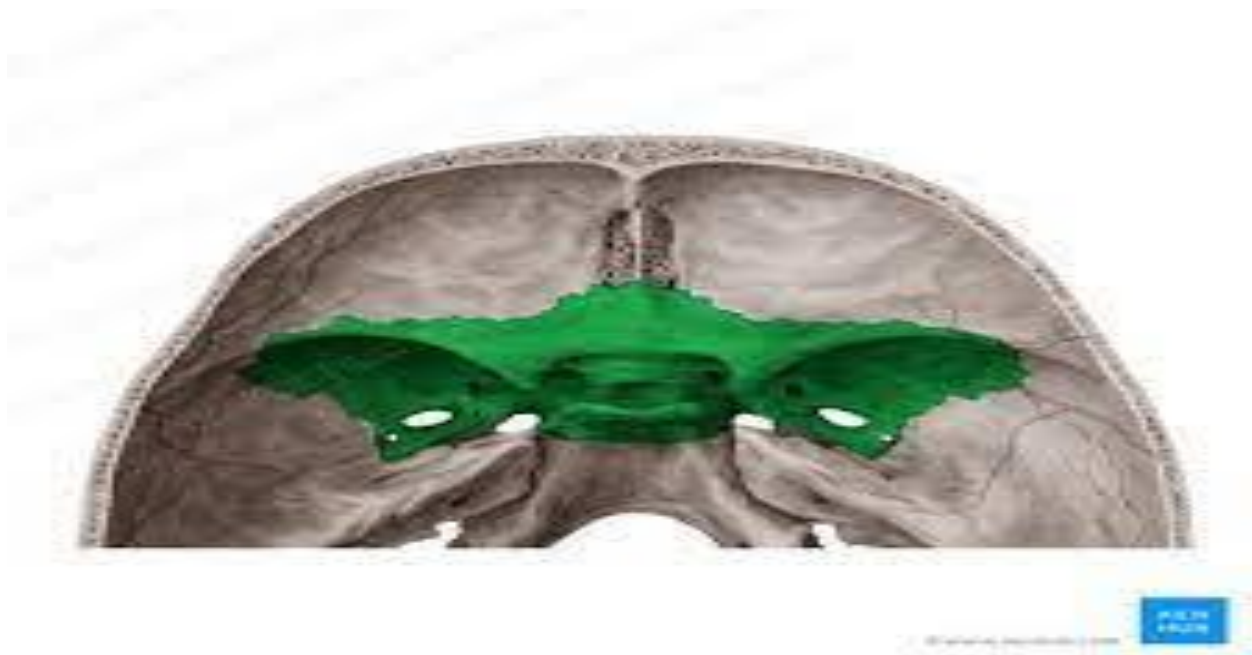
2. Occipital bone: is a trapezoid skull bone that contributes to the posteroinferior part of the cranial vault. It is pierced by the foramen magnum, permitting communication from the cranial cavity to the vertebral canal.



3. Ethmoid bone: is an unpaired bone in the skull that separates the nasal cavity from the brain. It is located at the roof of the nose, between the two orbits.



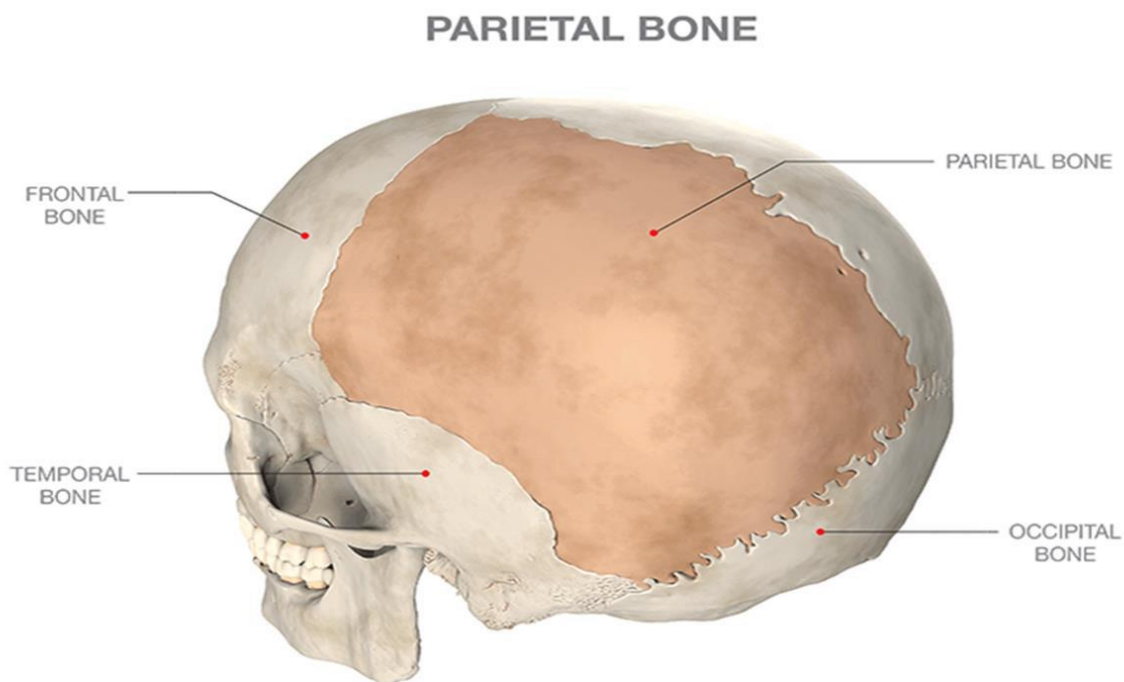
4.Sphenoid bone: is a large complex unpaired bone of the skull base.



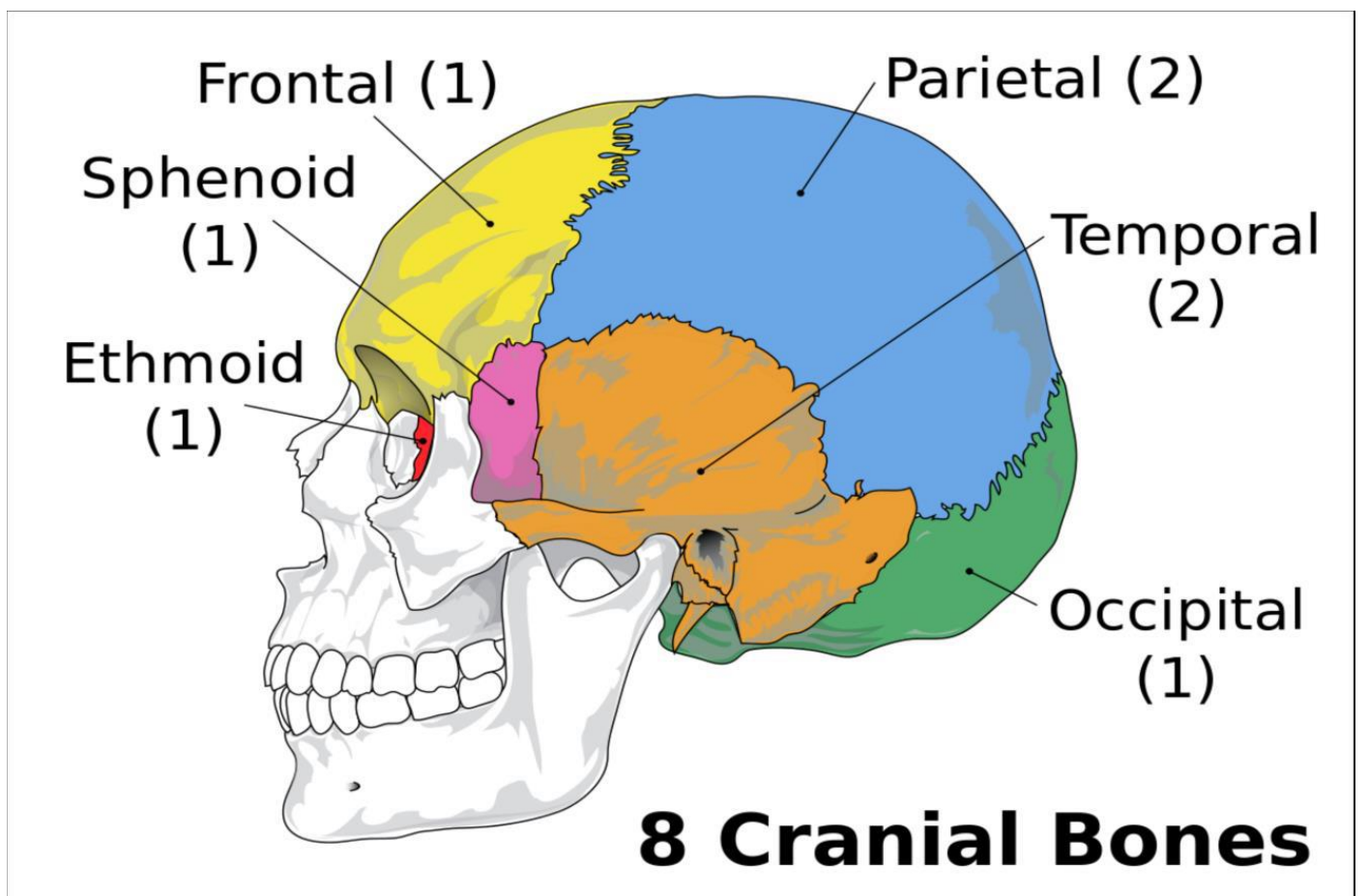
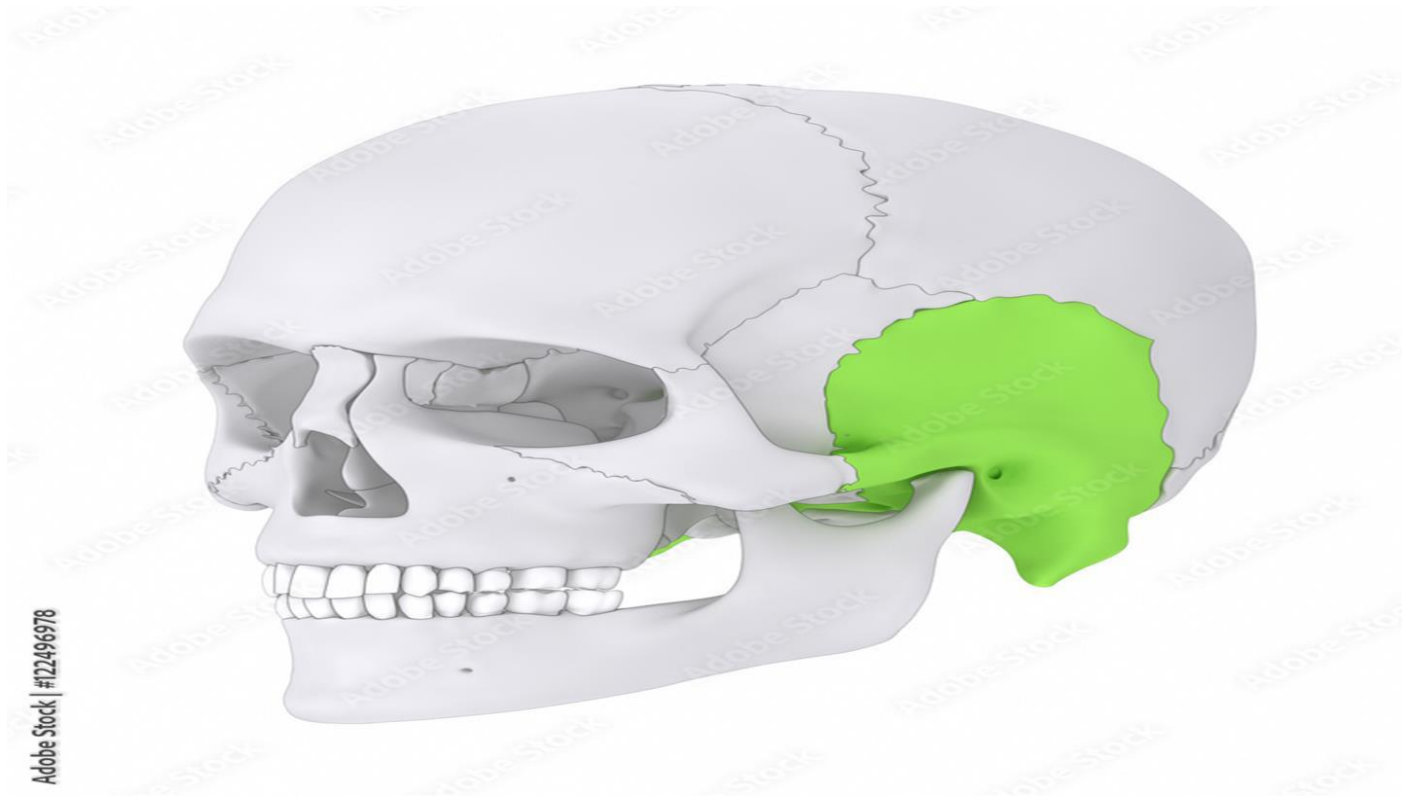
## Paired bones:

One on each side

1. parietal bones (2) bones above, is a paired, irregular, quadrilateral skull bone that forms the sides and roof of the cranium.



2. Temporal bones (2) bones below, is situated on the sides and the base of the cranium and lateral to the temporal lobe of the cerebrum.



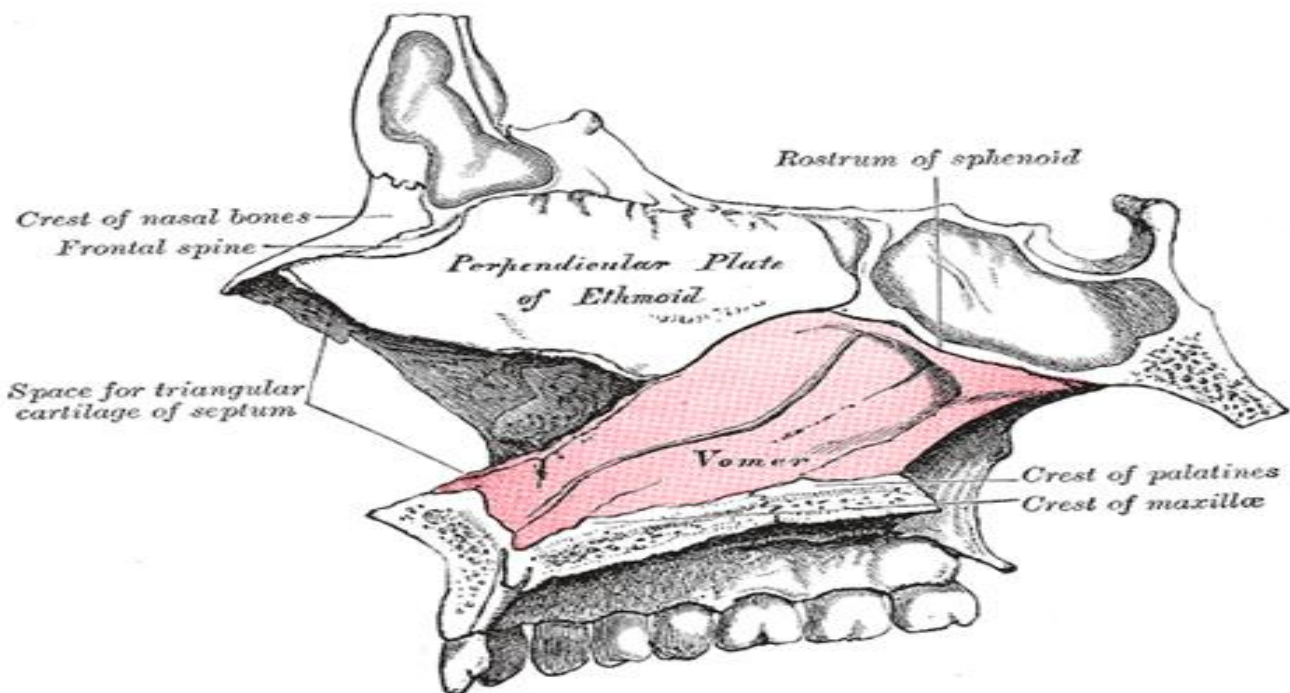
## Bones of the face:

They hold the eyes in the anterior position and allow the facial muscles to express our feelings.

They consist of (14) bones (two single and (12) paired)

**Single bones:-** In the middle .

**1.Vomer:-** forms most of the nasal septum



**2.Mandible:-** is the largest bone in the human skull, It holds the lower teeth in place, it assists in mastication and forms the lower jawline. The mandible is composed of the body and the ramus and is located inferior to the maxilla. The body is a horizontally curved portion that creates the lower jawline.



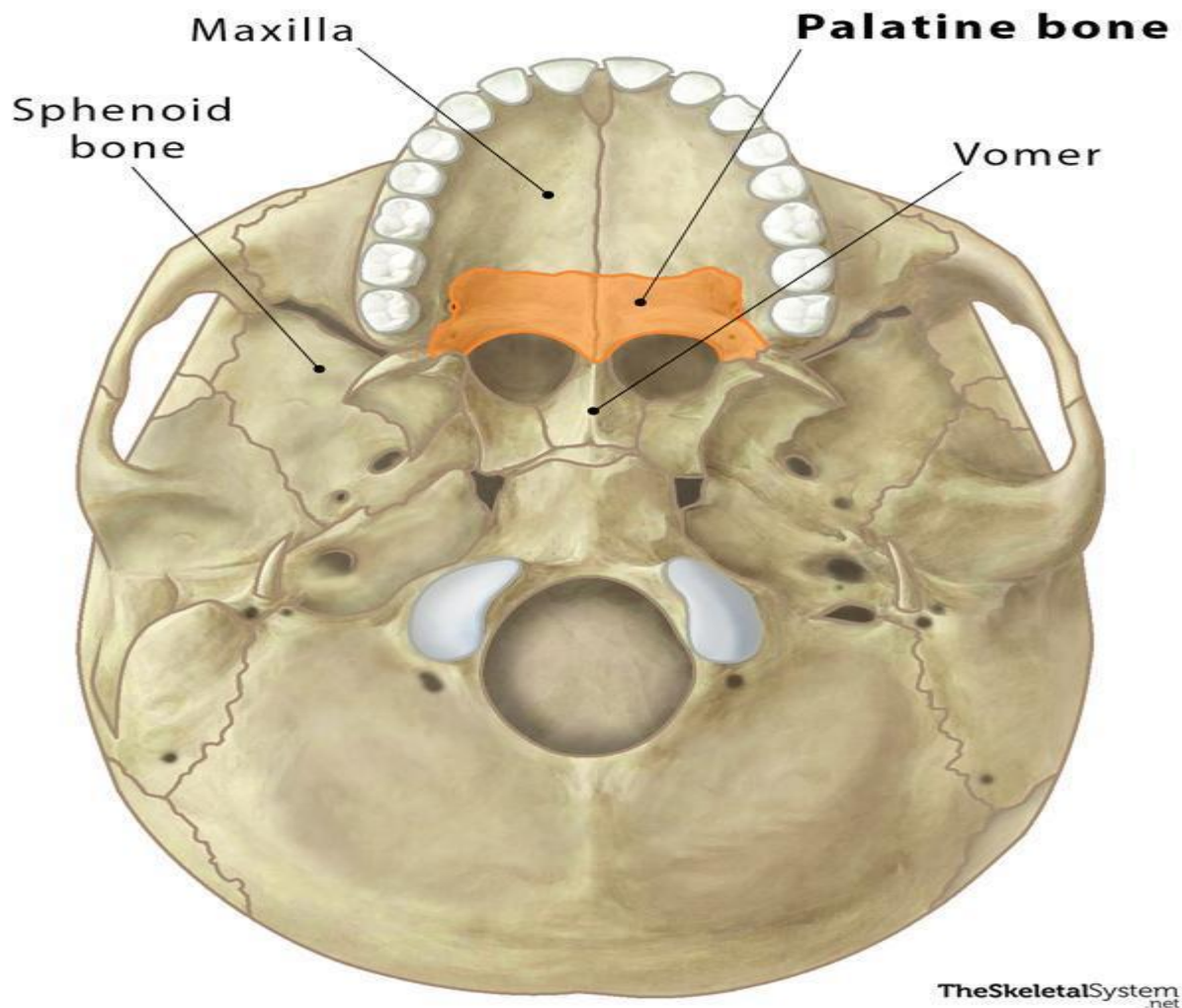
### Paired bones :-

**1.maxillae (2):-** The maxilla is **the bone that forms your upper jaw**. The right and left halves of the maxilla are irregularly shaped bones that fuse together in the middle of the skull, below the nose, in an area known as the intermaxillary suture.

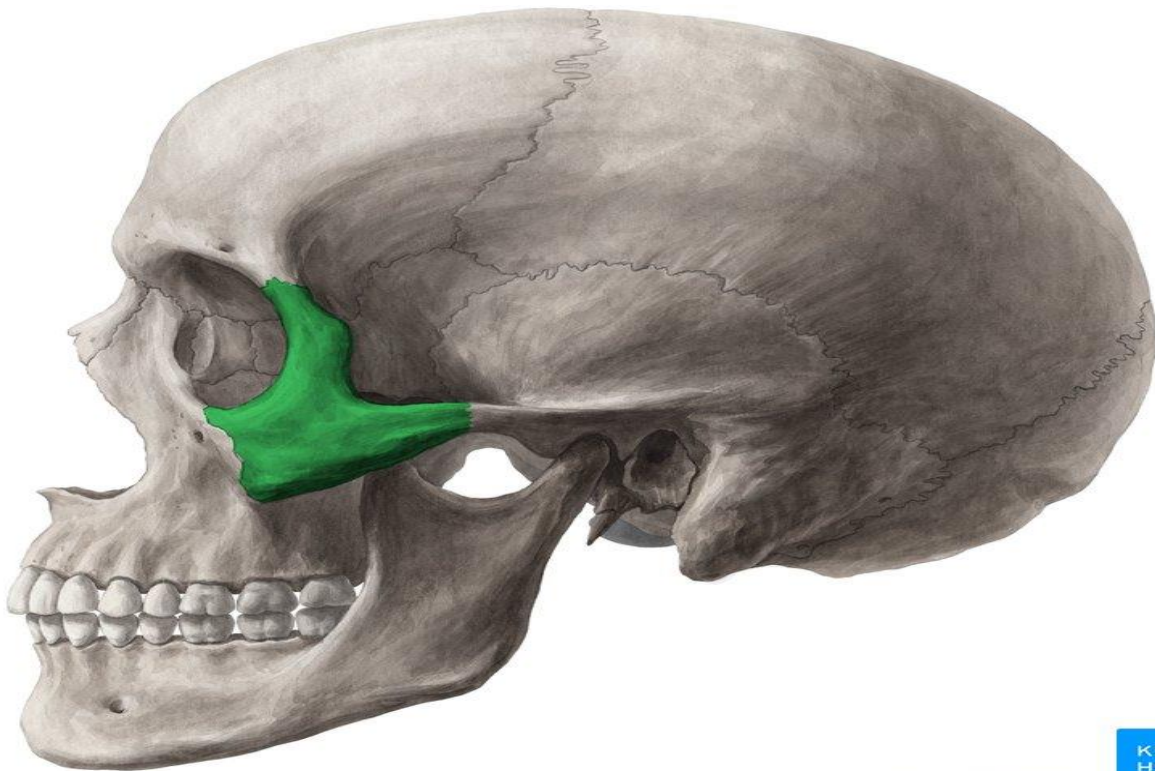


**2. palatine bones (2) :-** They are found behind the maxillary processes and form the posterior part of the hard palate

## Palatine Bone Location

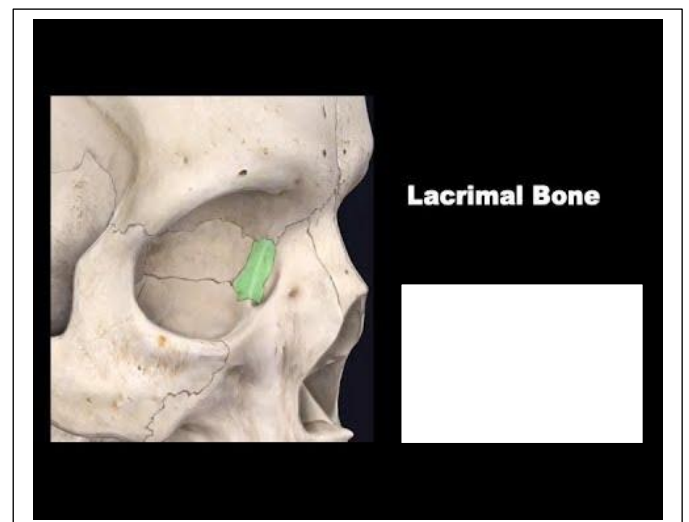
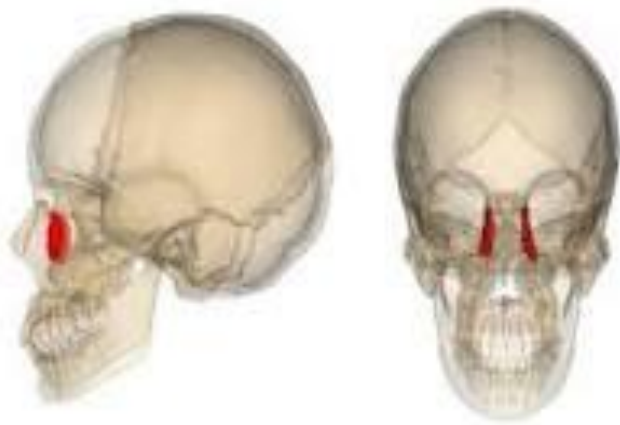


**3. Zygomatic bones (2):-** They form the bones of the cheek and also form a part of the lateral wall of the orbit (eye socket) .

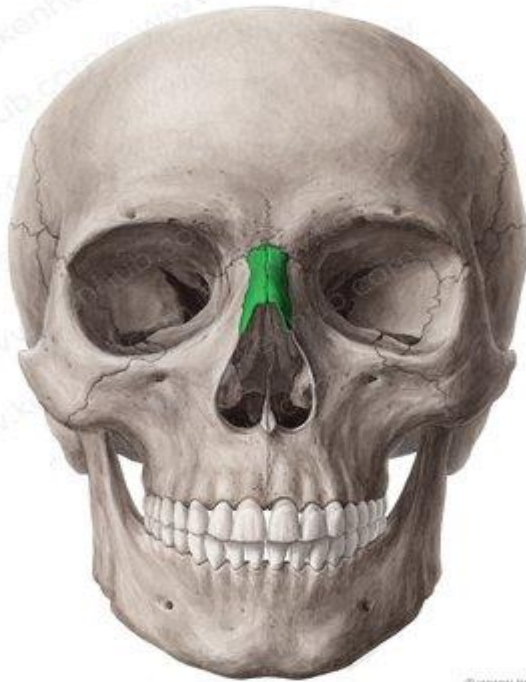


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**4.Lacrimal bones (2):** They form the bridge of the medial wall of the orbit each bone carries a groove for passage of tear (lacrima) These bones are small in size.



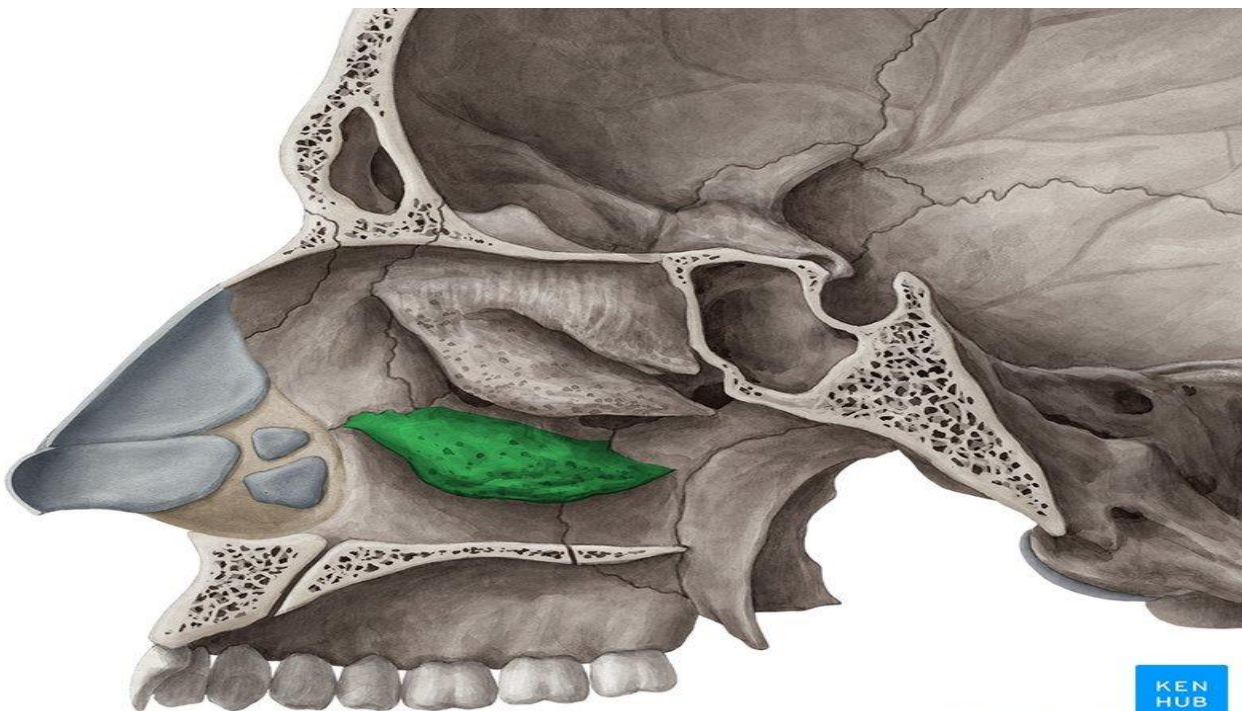
**5. Nasal bones (2):-** small, flat bone of the skull, they are placed side by side at the middle and upper part of the face and by their junction, form the bridge of the nose.



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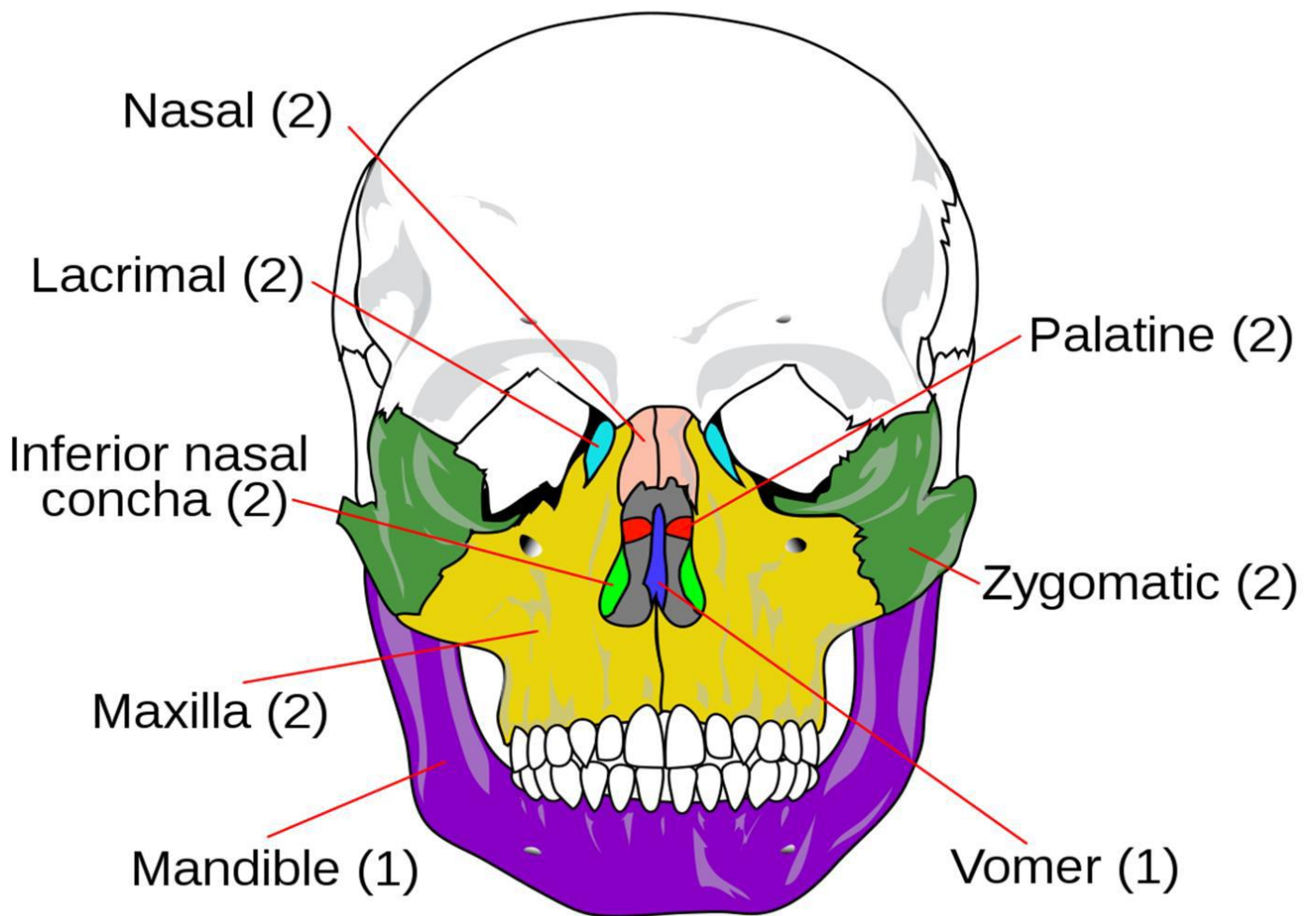
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**6. Inferior conches (2):-** They are thin curved bones. Each bone appear projecting from the lateral wall of the nose.



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# 14 facial bones