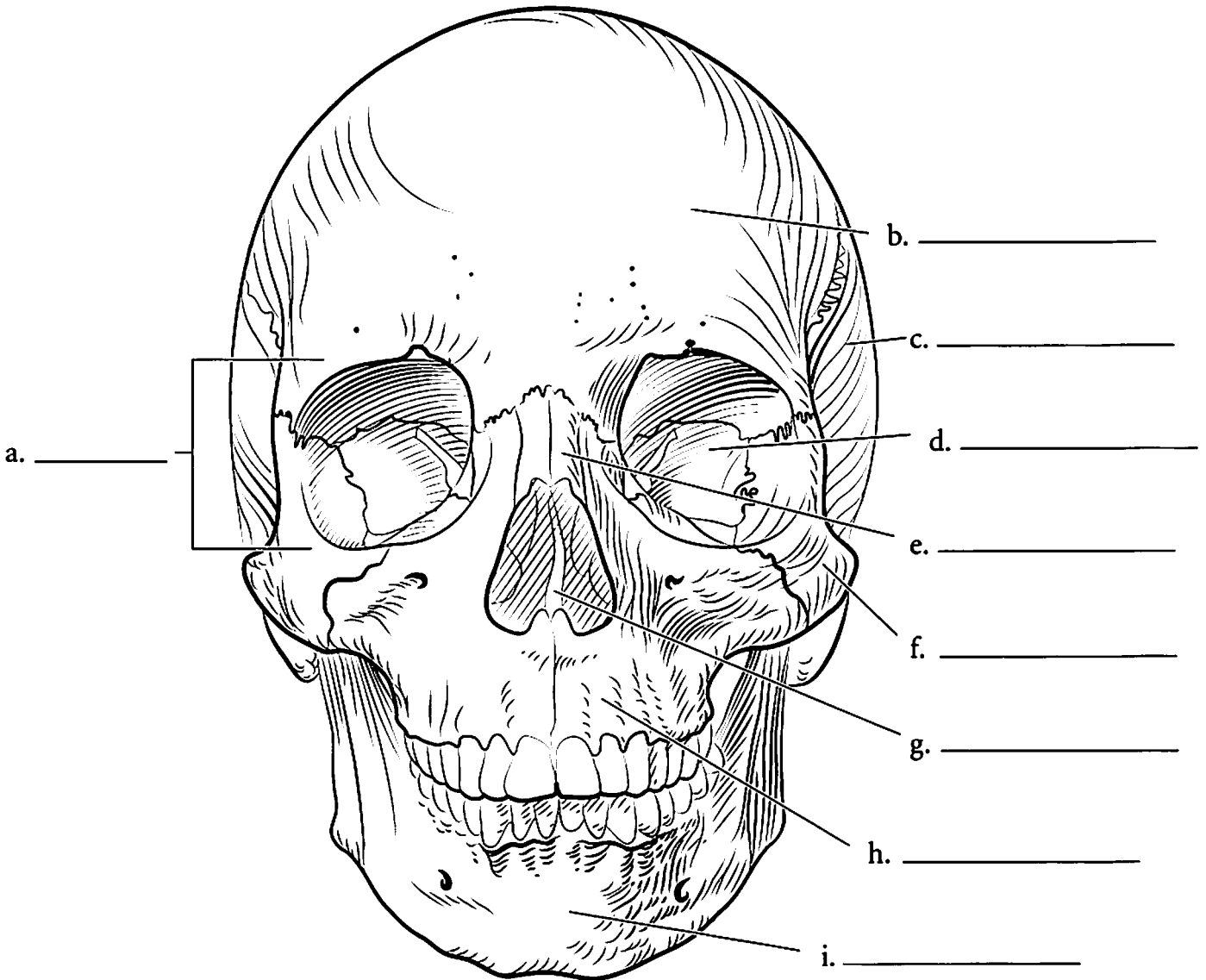


**FRONTAL ASPECT OF THE SKULL**

The skull is a complex structure. There are 8 cranial bones and 14 facial bones in the skull. From the anterior view, most of the facial bones can be seen, and some of the cranial bones are visible, too. The bone that makes up the forehead and extends beyond the eyebrows is the **frontal bone**. This bone forms the upper rim of the **orbit**, which is a socket that encloses the eye. In the back of the orbit is the **sphenoid bone**, and the lateral walls of the orbit are composed of the **zygomatic bones**. The bridge of the nose consists of the paired **nasal bones**, and just

lateral to them are the two **maxillae**. These bones hold the upper teeth. The lower teeth are held by the **mandible**. Inside the nasal cavity, two projections can be seen. These are the **inferior nasal conchae**. The wall that divides the nasal cavity is the **nasal septum**, and it consists of two bones, the **ethmoid bone** and the **vomer**. Along the side of the skull are the **temporal bones**, located posterior to the zygomatic bones. Label the major bones of the skull and color them in. As you color in the skull, try to use the same color for the same bone on different pages. This will help you associate the same bone with various views from which it can be seen.

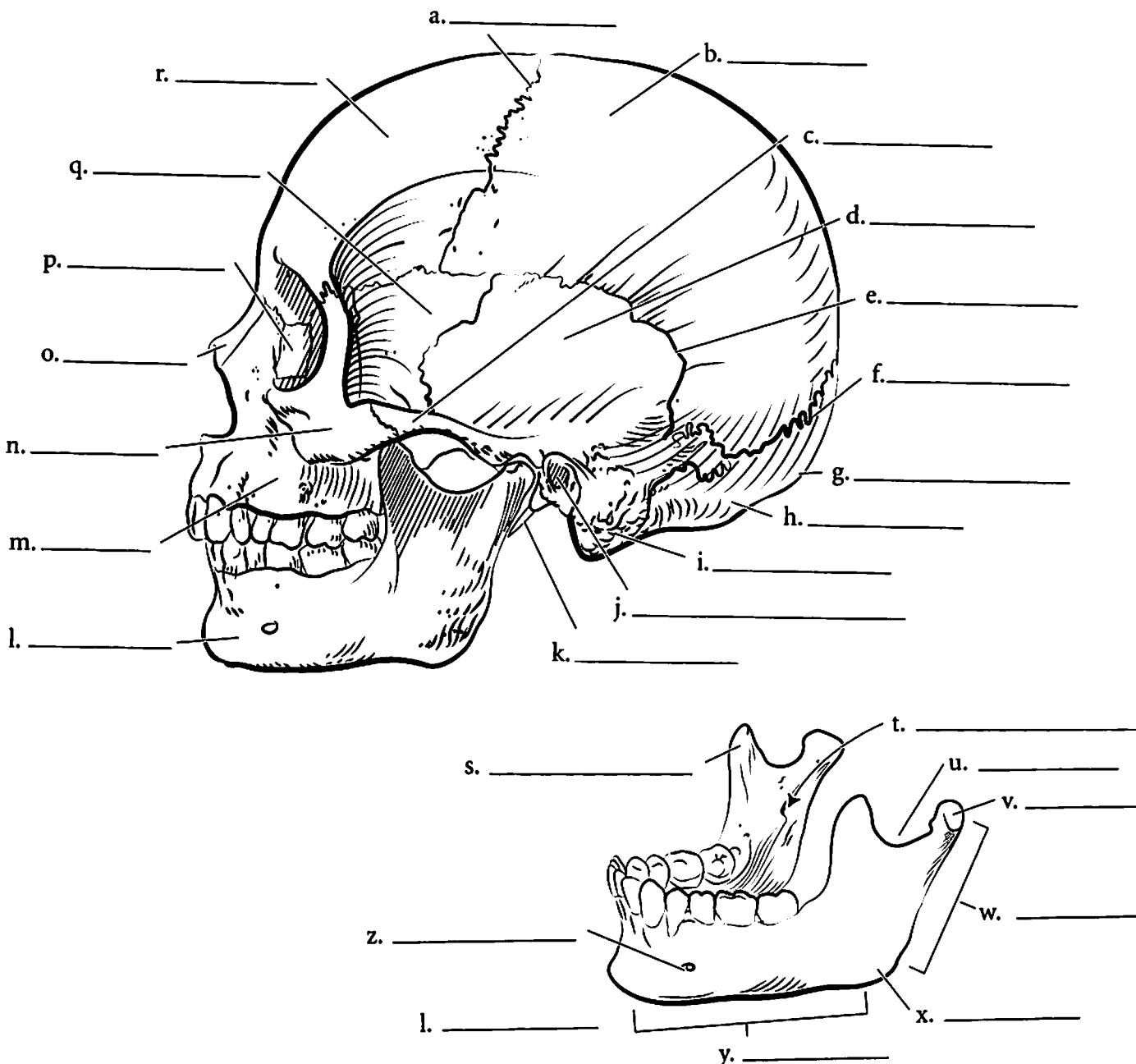


## LATERAL VIEW OF THE SKULL

Many bones seen from the anterior view can also be seen from the lateral view. The **frontal bone** is joined to the **parietal bones** by the **coronal suture**. The parietal bones span much of the cranium and articulate with the **occipital bone** at the **lambdoid suture**. There is a posterior extension of the **occipital bone** known as the **external occipital protuberance**. The exterior aspect of the **temporal bone** is seen from the lateral view, and many of the significant features such as the **mastoid process**, **external acoustic meatus**, and **styloid process** are visible. On the side is the elongated **zygomatic process**. The temporal bone articulates with other cranial bones by the **squamous suture**. The bone anterior to the temporal bone is the **sphenoid bone**. It is a bone that is found in the middle of the skull. The **nasal bone** is visible from the lateral view, and its relationship with the **maxilla** can be seen here. Behind the maxilla is

the **lacrimal bone**, which houses the **nasolacrimal canaliculus**, a canal that drains tears from the eye into the nose. The **mandible** articulates with the rest of the skull at the **mandibular condyle**. A depression anterior to the **mandibular condyle** is the **mandibular notch**, and the section of bone anterior to the **mandibular notch** is the **coronoid process**. Label the major features of the skull seen in lateral view and color each bone a different color.

Details of the mandible can be seen in the isolated bone. In addition to the features of the mandible listed above, find the **mandibular foramen** and the **mental foramen** of the mandible. These holes are for the passage of nerves and blood vessels. The main portion of the mandible is the **body**, and the upright part is the **ramus**. The angle is the posterior junction of these two parts. The teeth are located in **alveoli**, and the small segments of bone between the teeth are the **alveolar process**. Label the features of the mandible.

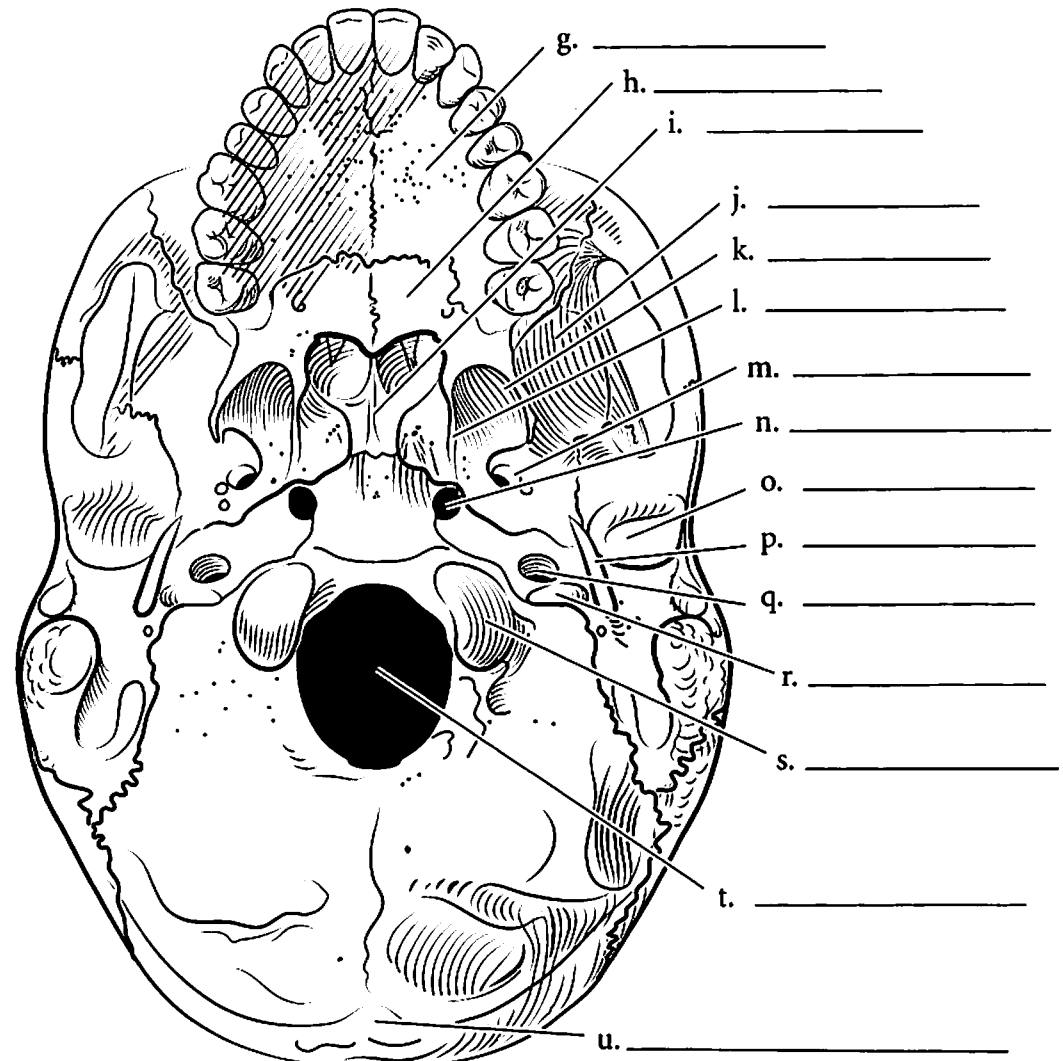
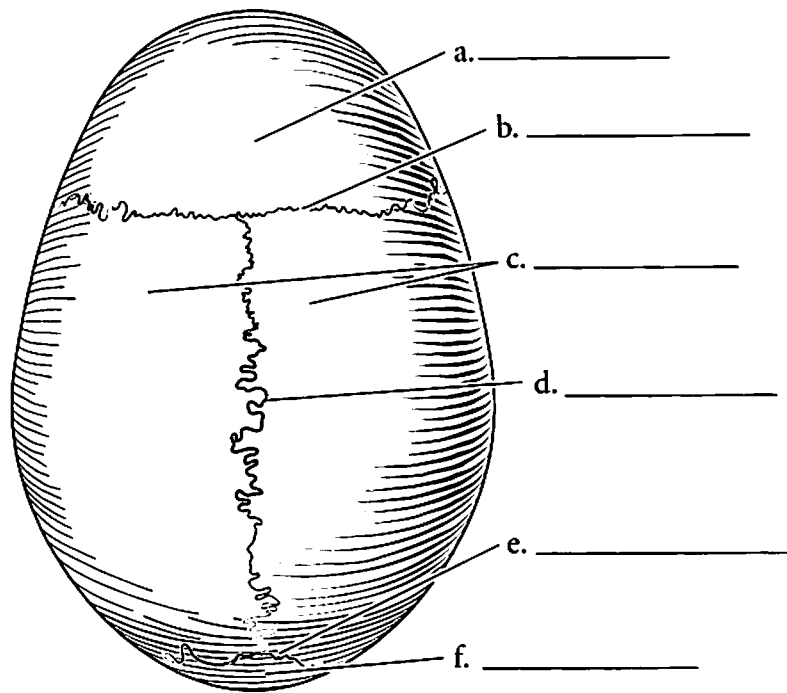


**Answer Key:** a. Coronal suture, b. Parietal bones, c. Zygomatic process, d. Temporal bone, e. Squamous suture, f. Lambdoid suture, g. External occipital protuberance, h. Occipital bone, i. Mastoid process, j. External acoustic meatus, k. Styloid process, l. Mandible, m. Maxilla, n. Zygomatic bone, o. Nasal bone, p. Lacrimal bone, q. Sphenoid bone, r. Frontal bone, s. Coronoid process, t. Mandibular foramen, u. Mandibular notch, v. Mandibular condyle, w. Ramus, x. Angle, y. Body, z. Mental foramen

## SKULL—TOP AND BOTTOM VIEWS

The superior aspect of the skull consists of few bones and few sutures. The **frontal bone** is the most anterior bone with the **parietal bones** directly posterior to it. The **coronal suture** separates the two, and the **sagittal suture** separates the parietal bones. The **lambdoid suture** separates the parietal bone from the **occipital bone**. Label the bones and sutures and color the bones in the illustrations.

The inferior aspect of the skull is more complex than the superior view. In the inferior view, the mandible has been removed so some of the underlying structures can be seen. The large opening in the occipital bone is the **foramen magnum**. The two bumps lateral to the foramen magnum are the **occipital condyles**, and the raised bump at the posterior part of the skull is the **external occipital protuberance**. The bone more anterior and lateral to the occipital bone is the **temporal bone**. The **jugular foramen** is located between the occipital and temporal bone. Another opening nearby is the **carotid canal**. Lateral to this is the **styloid process**, an attachment point for muscles. Lateral to this is a depression called the **mandibular fossa**. It is here that the mandible articulates with the temporal bone. The **foramen lacerum** and **foramen ovale** are medial to the mandibular fossa. The **sphenoid bone** spans the skull, and the major features seen from the inferior view are the **greater wing** and the **lateral and medial pterygoid plates**. The hard palate is made of the **palatine process of the maxilla** and the **palatine bones**. The bone that opens into the nasal cavity is the **vomer**. Label and color these features of the skull.



**Answer Key:** a. Frontal bone, b. Coronal suture, c. Parietal bones, d. Sagittal suture, e. Lambdoid suture, f. Occipital bone, g. Palatine process of maxilla, h. Palatine bone, i. Vomer, j. Greater wing of sphenoid bone, k. Lateral pterygoid plate of sphenoid bone, l. Medial pterygoid plate of sphenoid bone, m. Foramen ovale, n. Foramen lacerum, o. Mandibular fossa, p. Styloid process, q. Carotid canal, r. Jugular foramen, s. Occipital condyle, t. Foramen magnum, u. External occipital protuberance