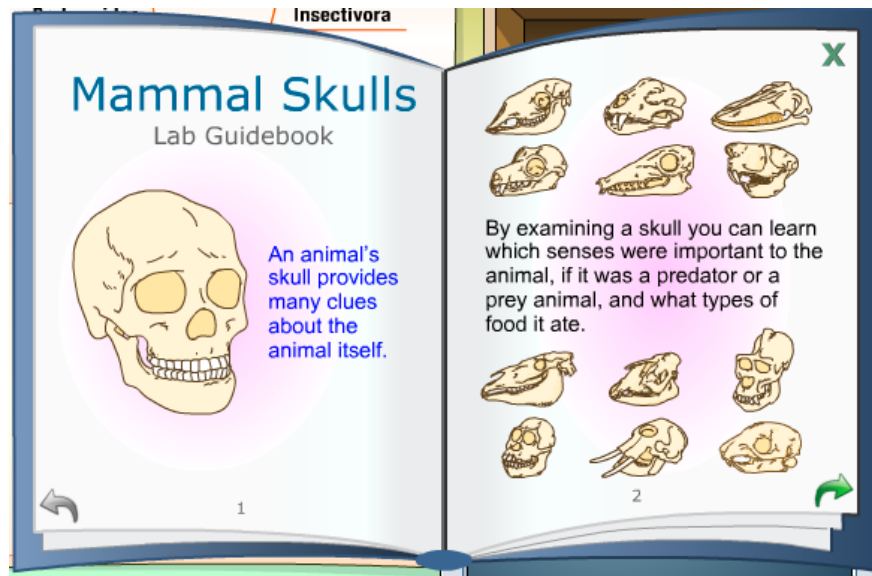
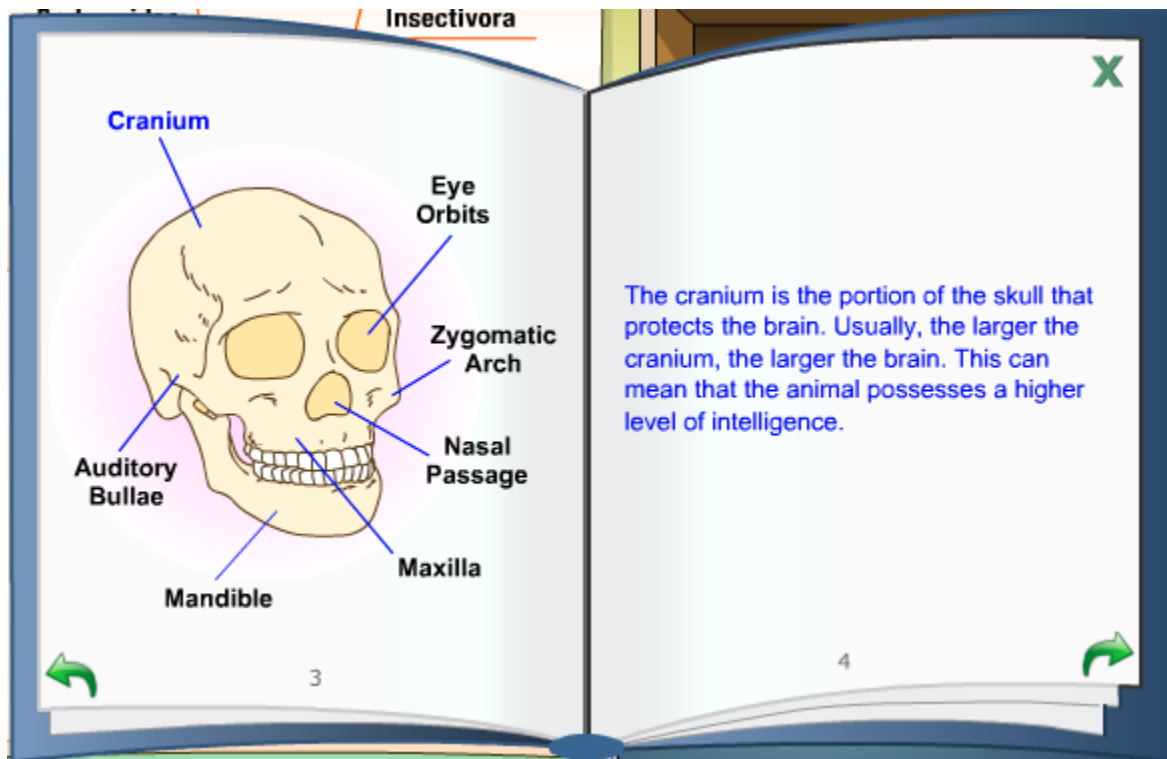
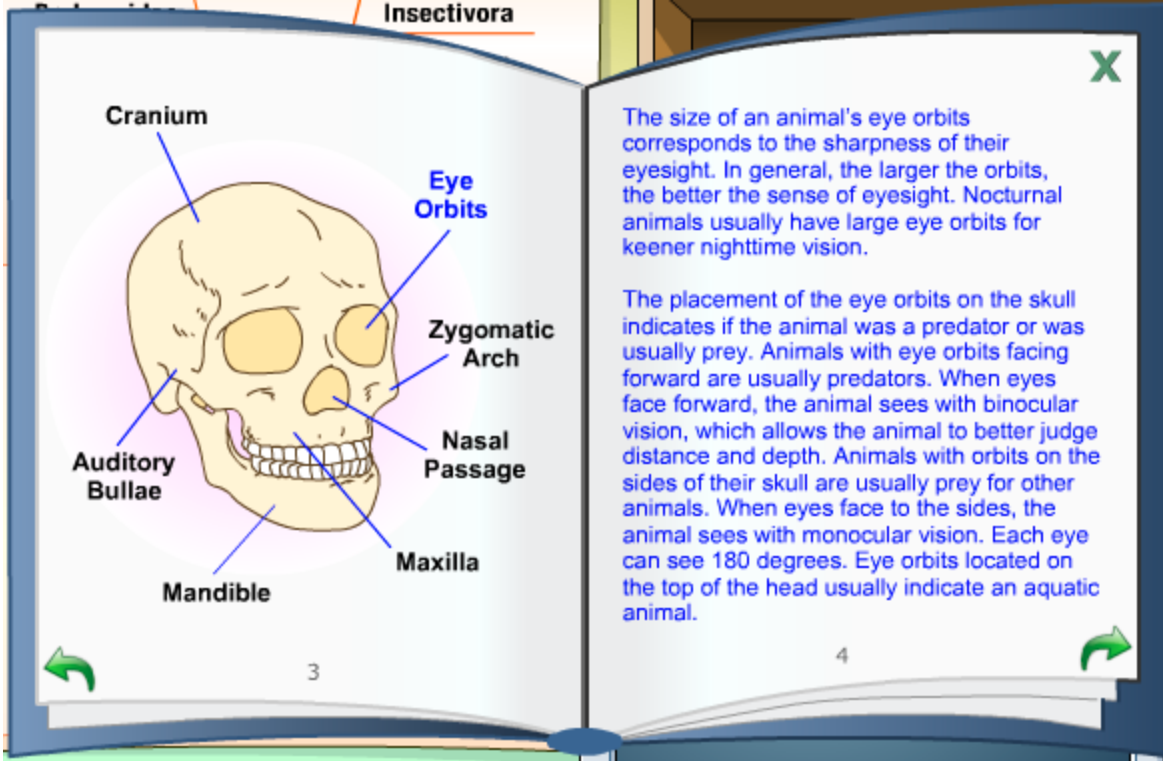


Mammal Skull Lab Guidebook



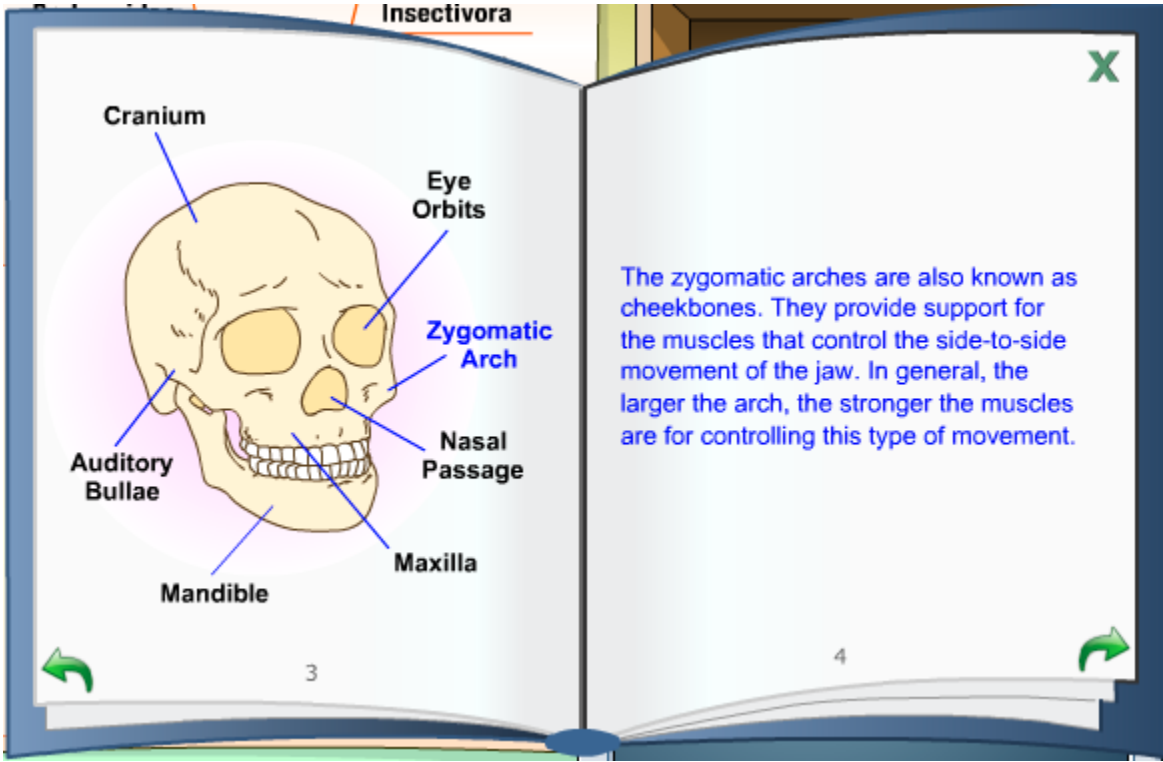
PARTS of the Skull



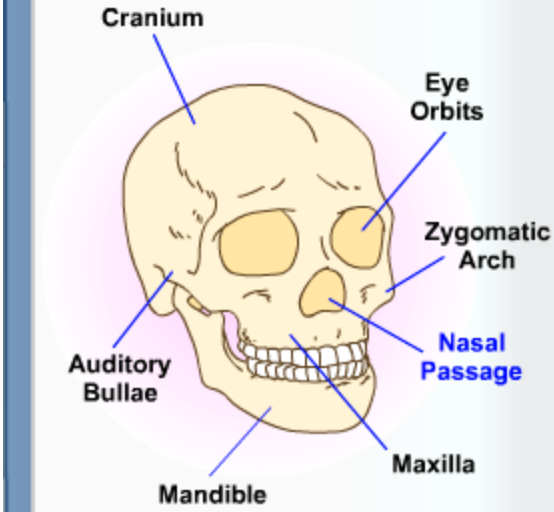


The size of an animal's eye orbits corresponds to the sharpness of their eyesight. In general, the larger the orbits, the better the sense of eyesight. Nocturnal animals usually have large eye orbits for keener nighttime vision.

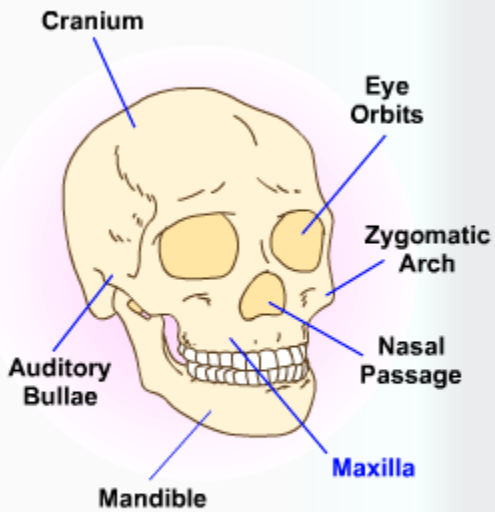
The placement of the eye orbits on the skull indicates if the animal was a predator or was usually prey. Animals with eye orbits facing forward are usually predators. When eyes face forward, the animal sees with binocular vision, which allows the animal to better judge distance and depth. Animals with orbits on the sides of their skull are usually prey for other animals. When eyes face to the sides, the animal sees with monocular vision. Each eye can see 180 degrees. Eye orbits located on the top of the head usually indicate an aquatic animal.



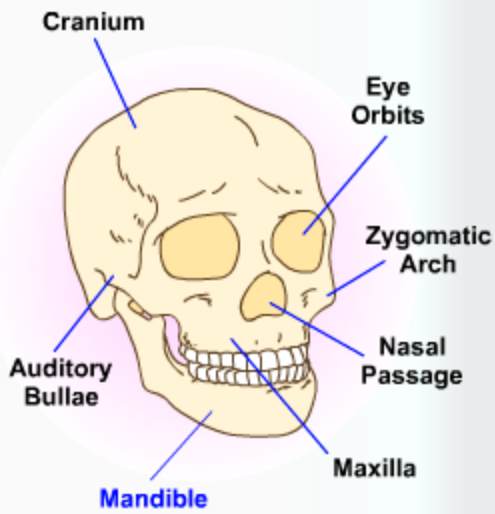
The zygomatic arches are also known as cheekbones. They provide support for the muscles that control the side-to-side movement of the jaw. In general, the larger the arch, the stronger the muscles are for controlling this type of movement.



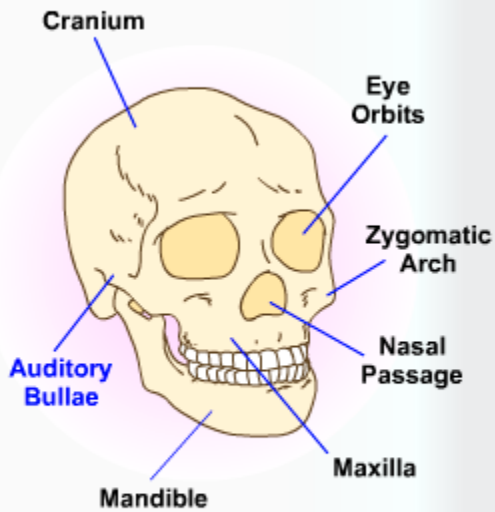
The middle top bones of the nasal passage encase a thin, bony framework for the membranes in the nose. The larger the nasal passage, the more important the sense of smell is to the animal's survival. The nasal passage area is sometimes called the rostrum.



The maxilla is the bone in the upper jaw that holds the canine, premolar, and molar teeth.

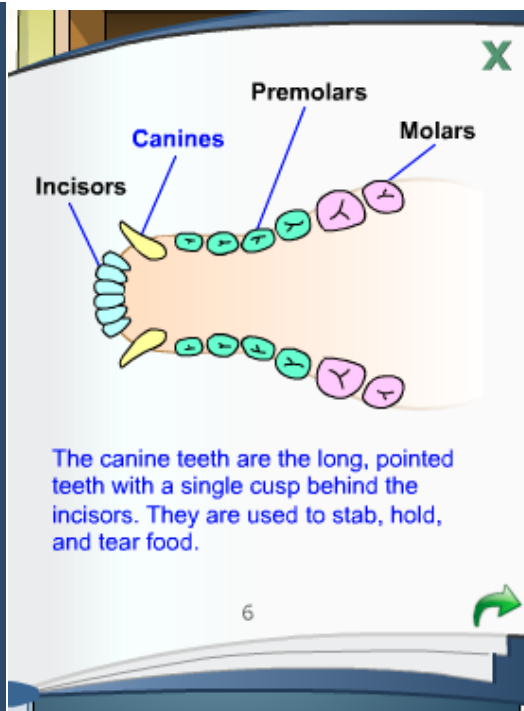
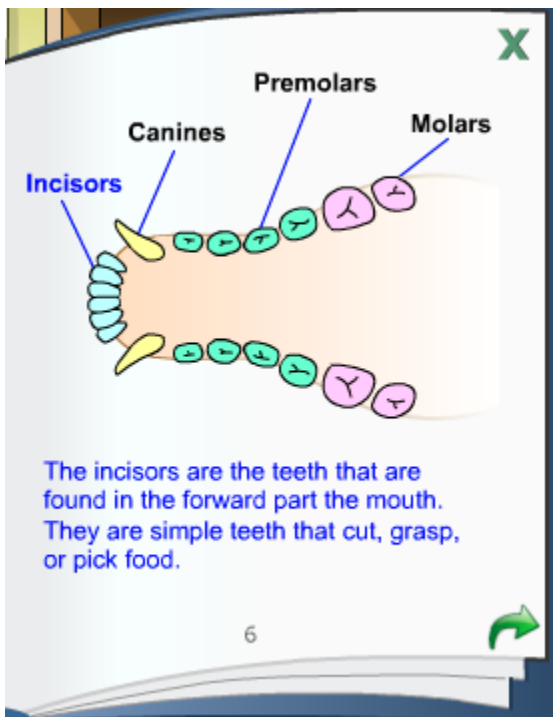
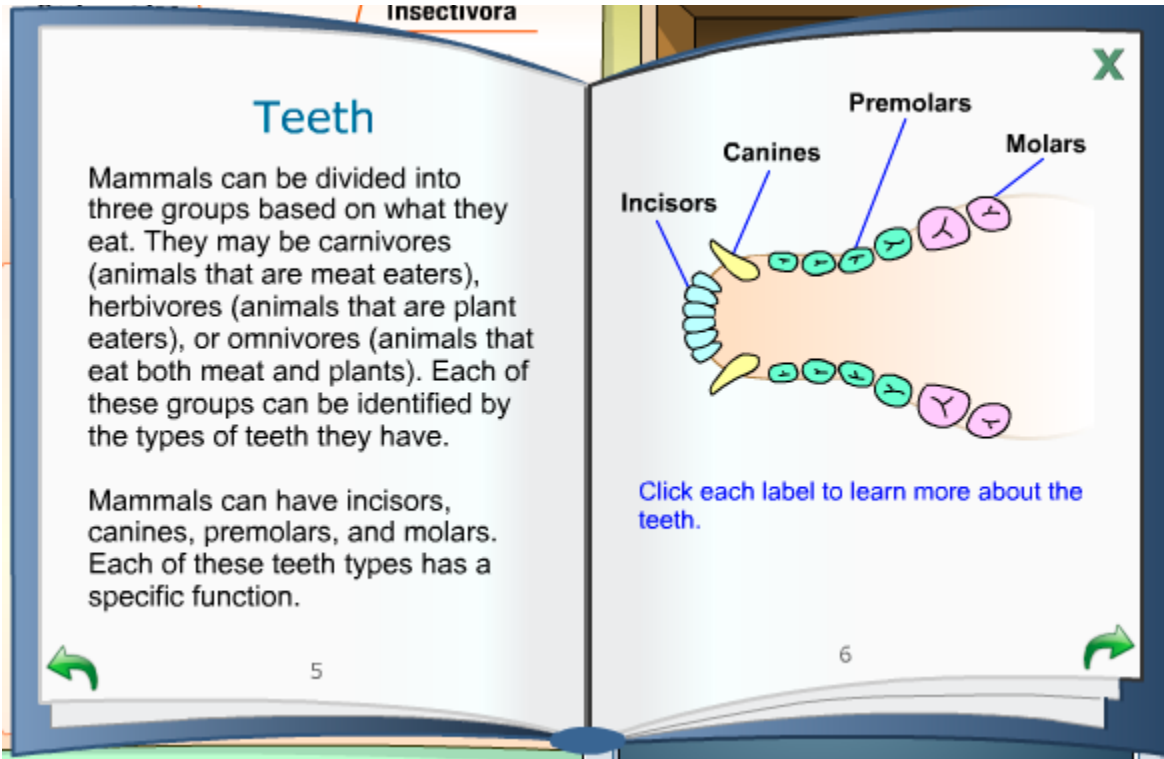


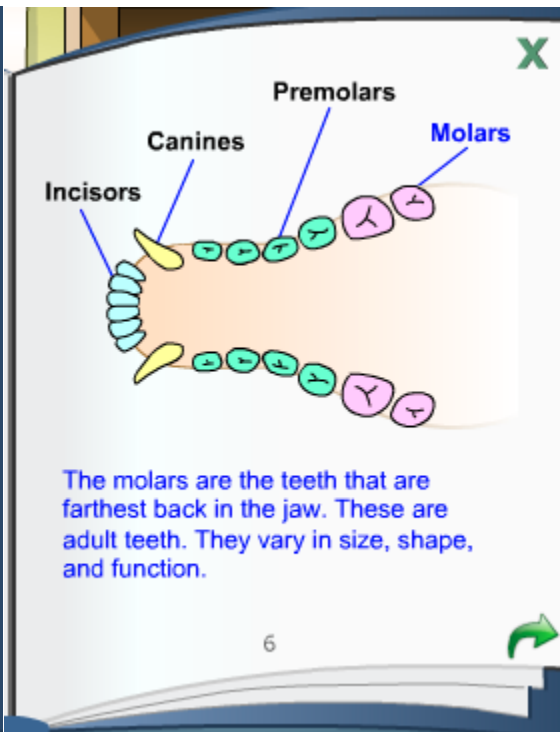
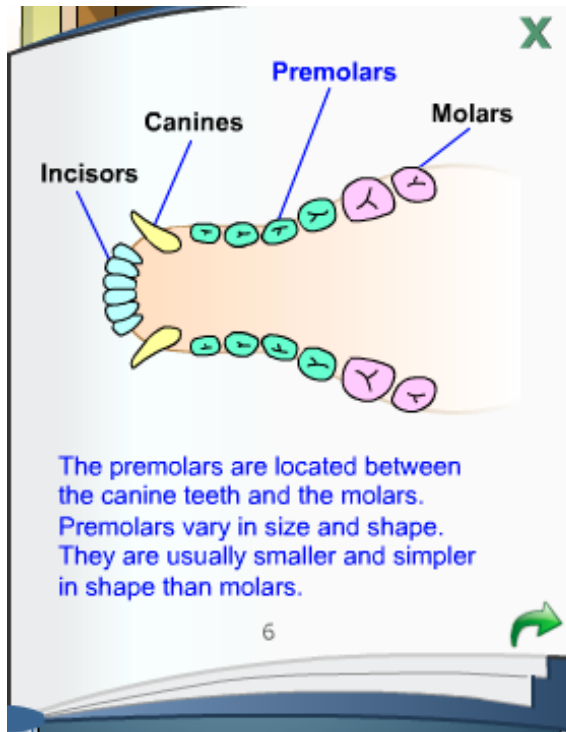
The mandible is the lower jaw. The ability to move the lower jaw from side-to-side is characteristic of some orders of mammals. In general, a short, tight jaw leads to a more powerful bite.



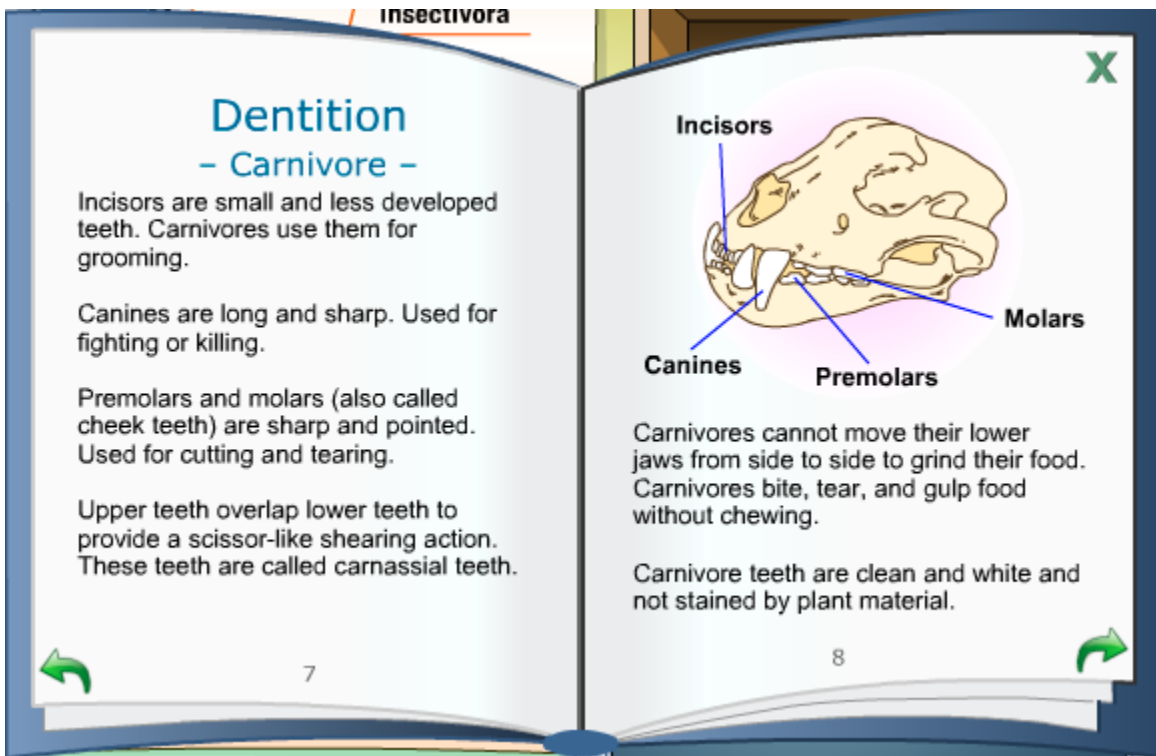
The auditory bullae are the bony, bulbous portions of the skull that contain the structures of the inner ear. The larger the auditory bullae, the better the sense of hearing the animal possesses.

Types of Teeth





Teeth of Mammals



Dentition - Herbivore -

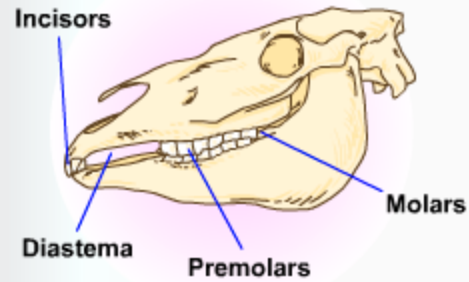
Incisors are large, well-developed teeth for cutting plant material.

Canine teeth, if present, resemble incisors in form and function.

Some herbivores do not have any upper incisors or canine teeth.

Herbivores have a large space between the incisors and cheek teeth. This is called a diastema.

Cheek teeth are large and wide, with ridges for grinding and chewing.



Herbivores are able to move their lower jaws from side-to-side to chew plant material.

Teeth wear with age and use.

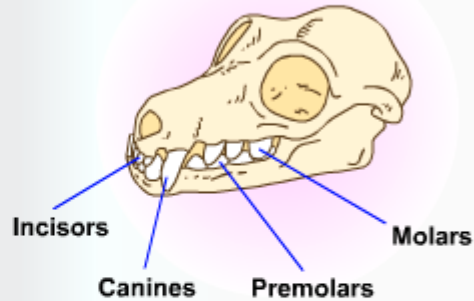
Dentition - Omnivore -

Incisors are large and well-developed for cutting plant material.

Canine teeth long and pointed, for killing and holding prey.

Cheek teeth are a combination of sharp, scissor-like carnassial teeth and teeth with more rounded cusps for grinding and crushing.

Primates, but not all omnivores, have the ability to move their jaws from side-to-side.



The cheek teeth indicate if the animal is primarily a carnivore or a herbivore.

¹ Adapted from: http://glencoe.mheducation.com/sites/dl/free/0078802849/383956/BL_27.html