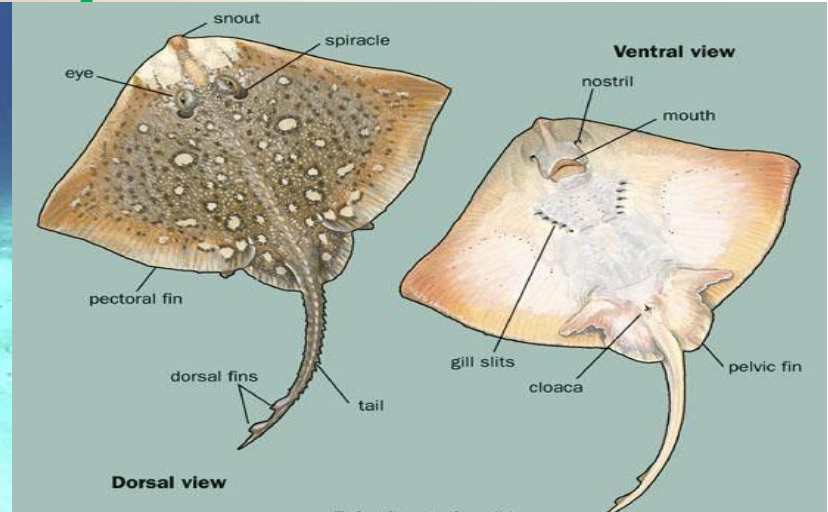
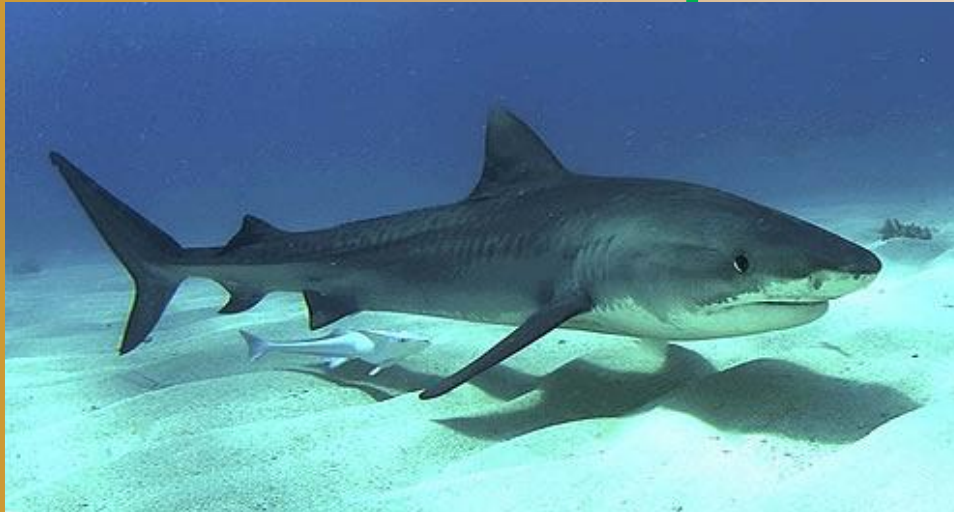


COMPARITIVE ANATOMY OF CHORDATES

subphylum:vertebrata

group:Gnathostomata

superclass:pisces



Lec. ٤ (٥/١١/٢٠١٧)

group: Gnathostomata

Gnathostomata: divided into two superclasses such as
Superclass: **Pisces** includes the **fishes** and superclass:
Tetrapoda including the four footed animals



group: **Gnathostomata**

Superclass: **Pisces**

Class: **Chondrichthyes**

Cartilaginous fishes



chondrichthyans consists of two subclasses, the
(subclass: **Elasmobranchii**/shark, dogfish, skate, rays)
(subclass: **Holocephali** /the chimaeras).

Class: Chondrichthyes

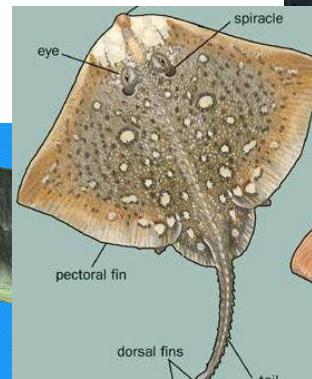
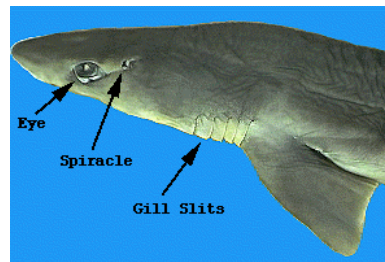
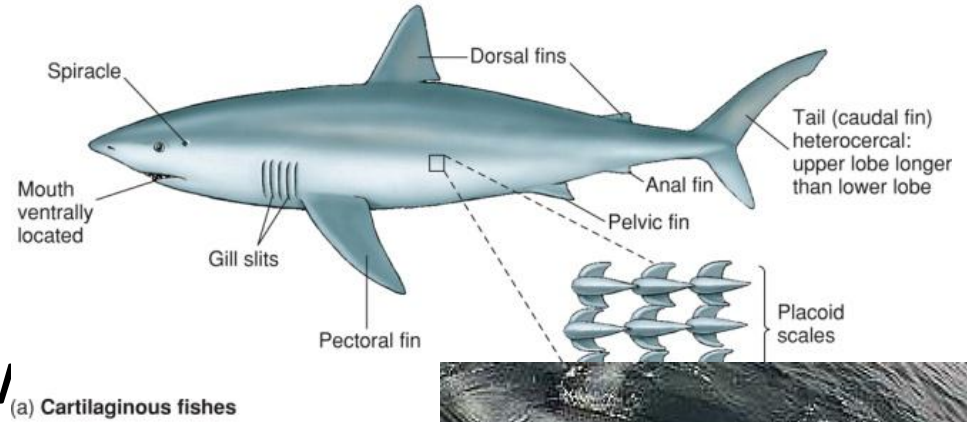
Subclass: Elasmobranchii

(Dogfish, shark, skate and rays)



- 1. The body entirely made
- 2. The skin is covered
- 3. Mouth ventral.
- 4. two pairs of fins
- 5. Have Upper and low
- 6. Teeth on the jaws.
- 7. The spiracles

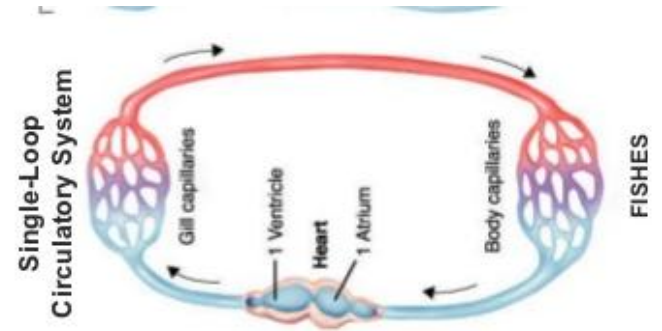
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^ . Three semicircular canals in each middle ear.

9 . circulation is

Heart consists of



1 . there are 0 to 4 pairs of gill slits and No operculum.

1 . No swim bladder

1 . Heterocercal tail

1 . Fertilization internal, Paired reproductive organs and ducts, males have Claspers.