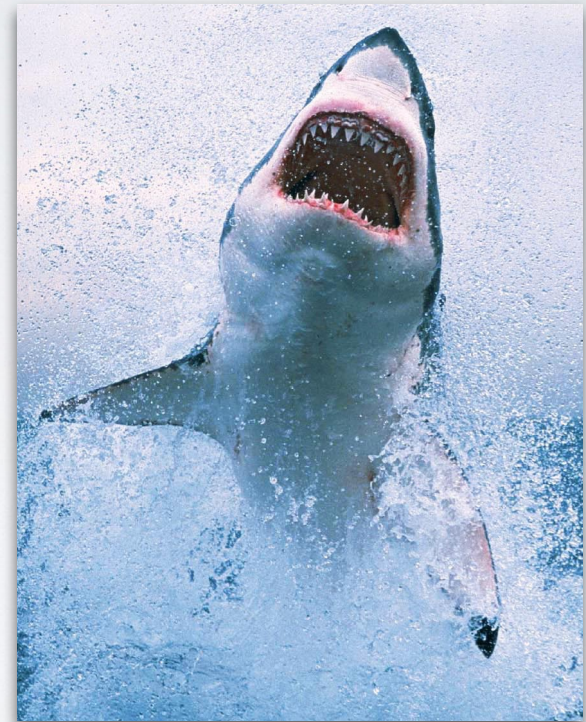


SHARKS



CARTILAGINOUS FISH

- Sharks are classified as fish with over 250 known species
- Sharks are over 300 million years old
- Thought to be at the peak of their evolutionary development



CARTILAGINOUS FISH

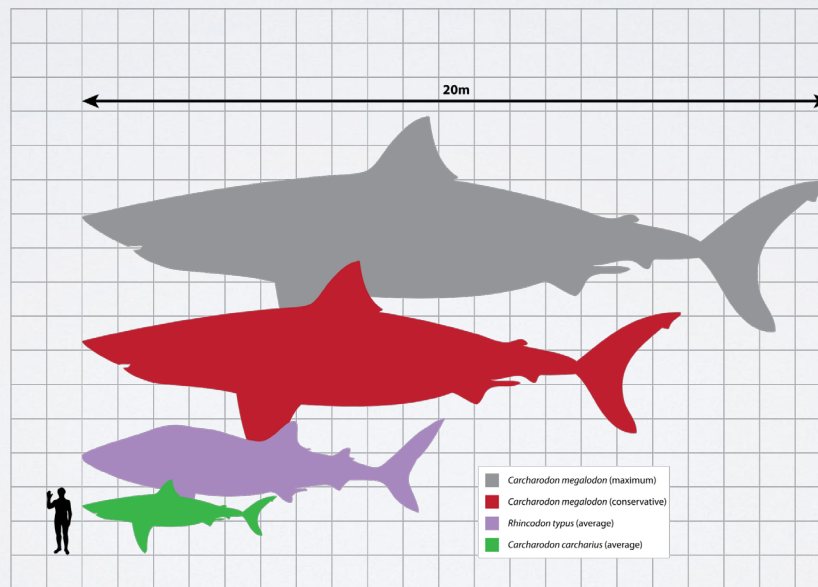
- Sharks closely resemble their ancestral form and are perfect eating machine



Megalodon

CARTILAGINOUS FISH

Megalodon Sizes



CARTILAGINOUS FISH

Types of Sharks



Hammerhead



Blue



Great White

CARTILAGINOUS FISH

Types of Sharks



Goblin



Mako



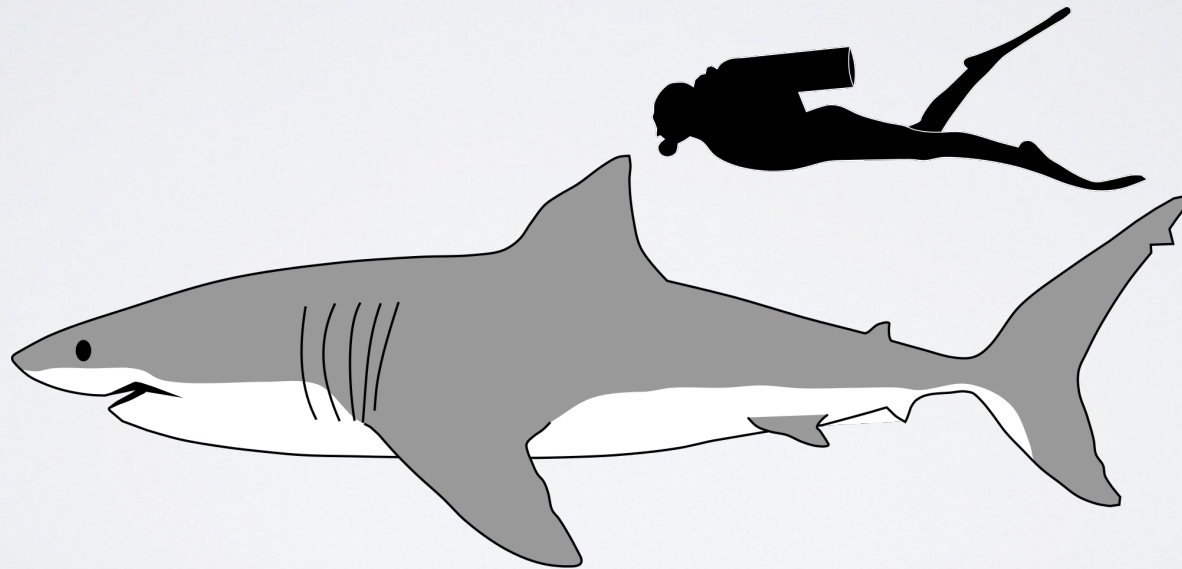
Greenland

CARTILAGINOUS FISH

- Shark Characteristics:
 - Average size is about 6 feet
 - Most are 3 feet or less, but some can be over 20 feet
 - No swim bladder, but they do have a massive liver (1/3 body weight) to compensate
 - NO bones just cartilage

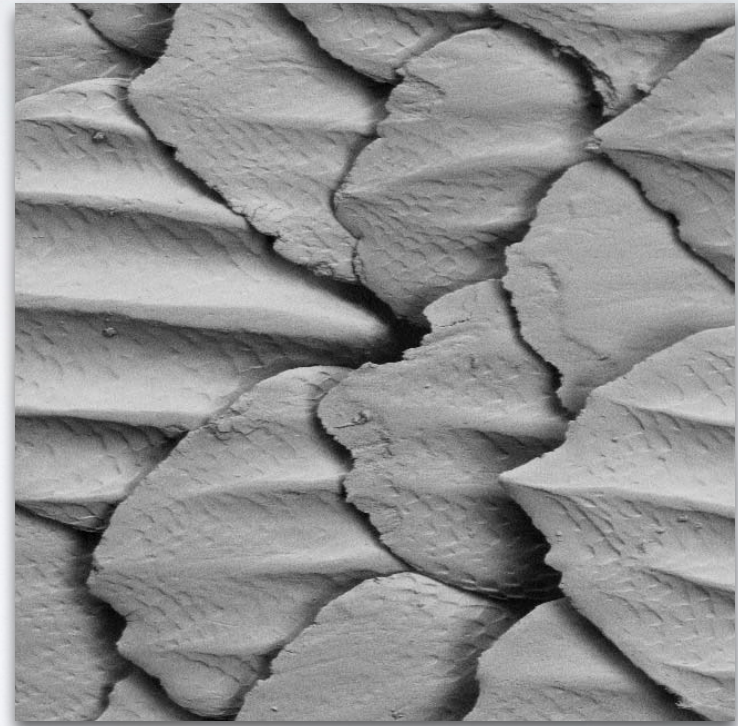
CARTILAGINOUS FISH

Great White Compared to a Human



CARTILAGINOUS FISH

- Shark Characteristics: (continued)
 - Skin is denticles (placoid scales)
 - Display many variations in body shapes and sizes
 - Streamlined and smooth from the head to the tail

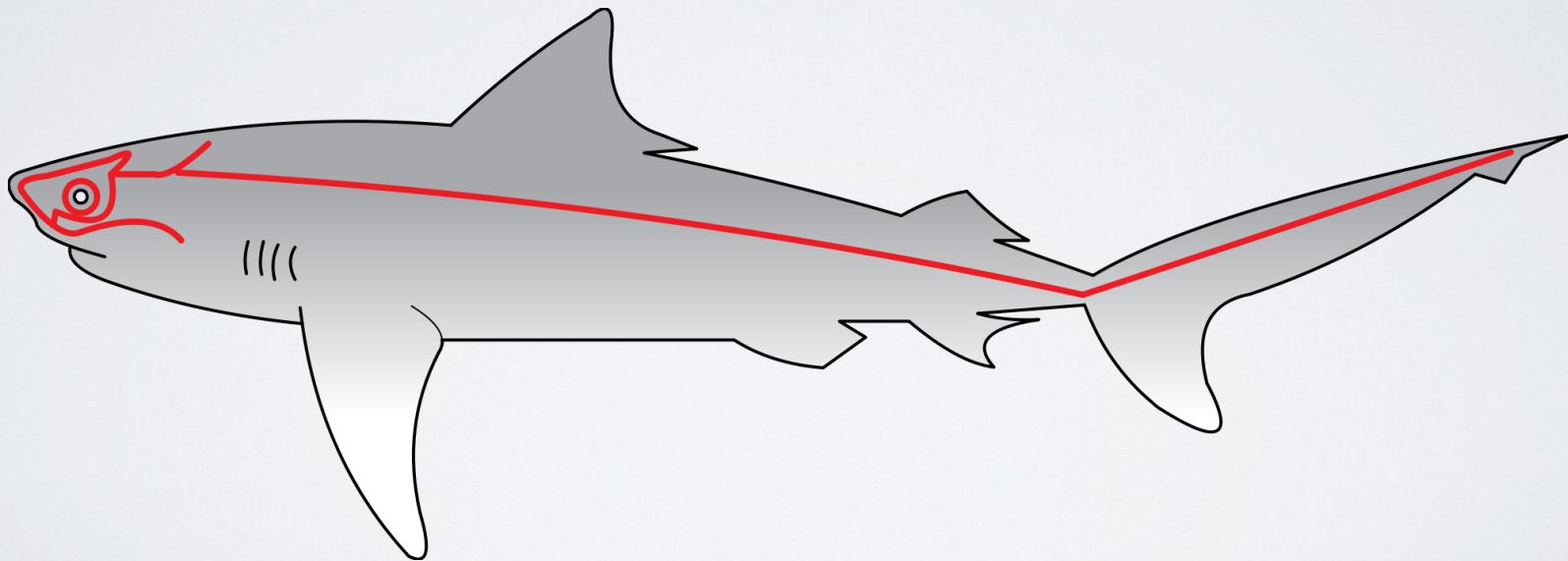


CARTILAGINOUS FISH

- Shark Characteristics: (continued)
 - Lateral line organs in sharks pick up sound vibrations over great distances
 - Sense of smell is very acute and can detect trace amounts of blood from over a half a kilometer away
 - Amullae of Lorenzini - sense electrical fields generated by muscles of fish and other potential prey

CARTILAGINOUS FISH

Lateral Line Organs

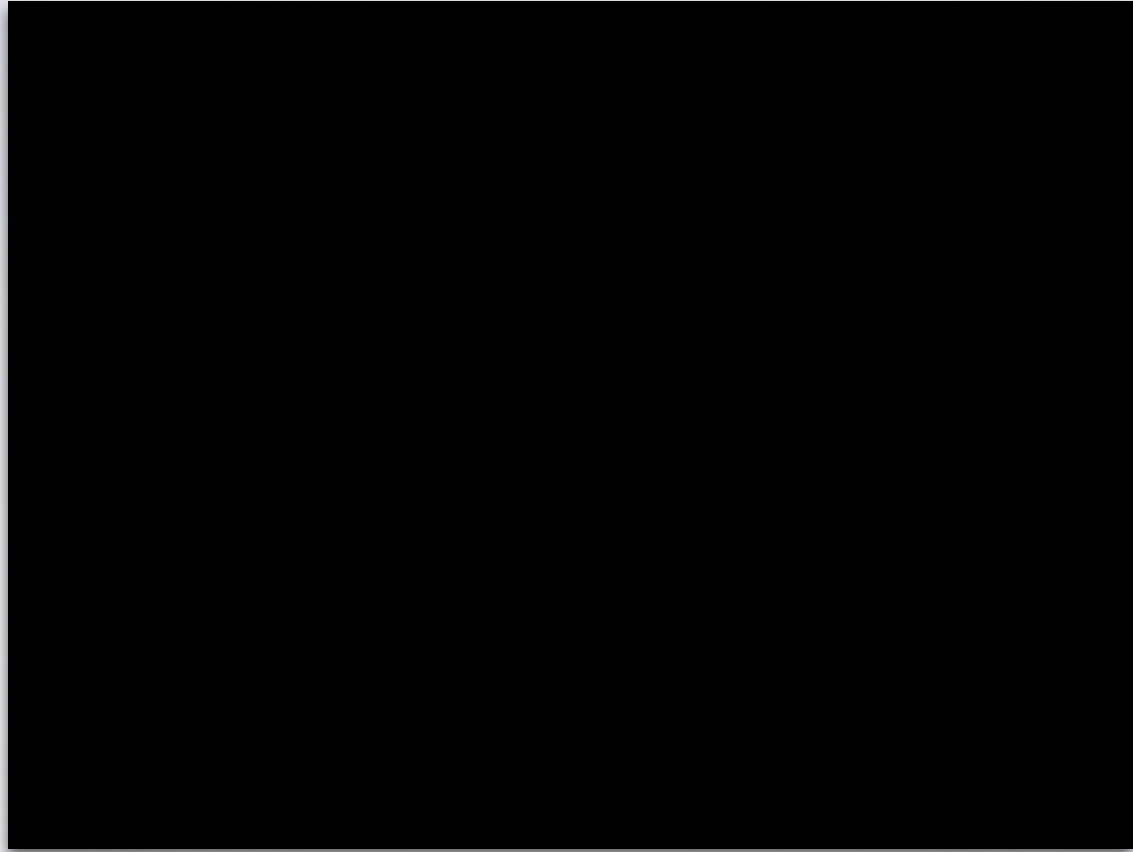


CARTILAGINOUS FISH

- Shark Reproduction:
 - Sharks and other cartilaginous fish fertilize internally
 - Male sharks have two organs called claspers located between pelvic fins and they transfer sperm into the females reproductive tract



Claspers



Lemon Shark Gives Birth

CARTILAGINOUS FISH

- Shark Reproduction: (continued)
 - Some of the young develop predatory behavior in the womb and eat their siblings





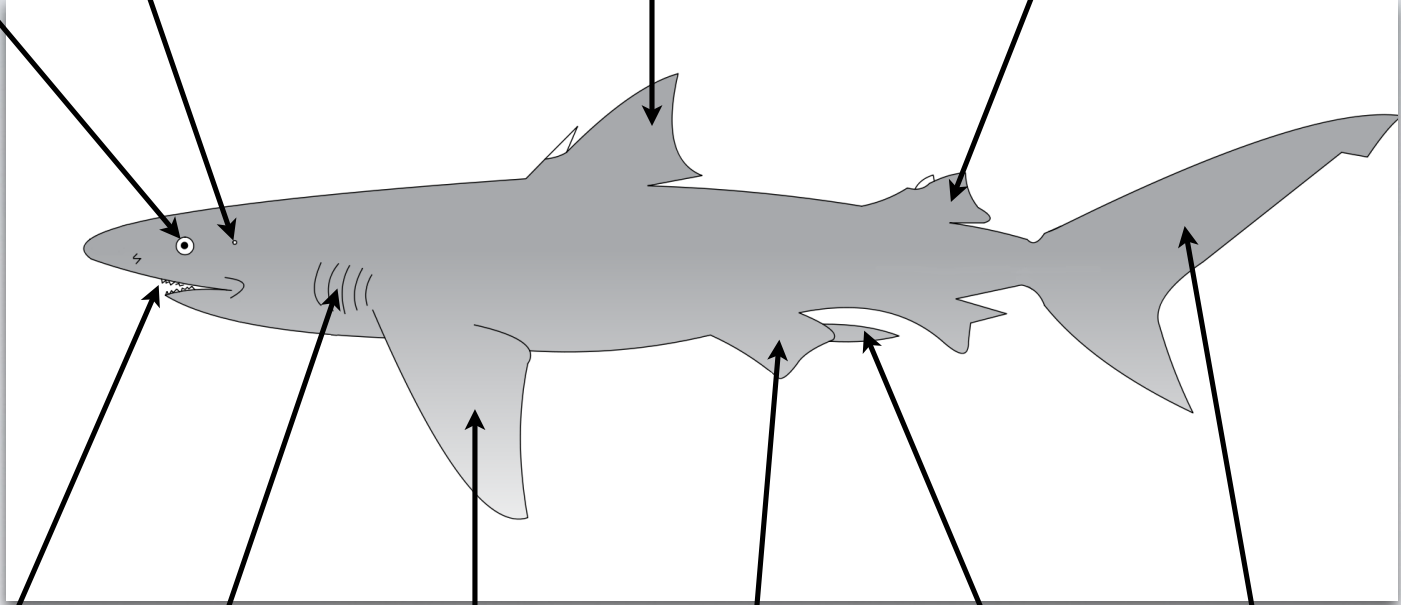
Shark Eats Siblings in Womb

Eye

Spiracle

Dorsal Fin

Second Dorsal Fin



Mouth

Gills

Pectoral Fin

Pelvic Fin

Clasper
(male)

Caudal Fin

Shark Anatomy