

Shark Dentition and Diets Fact Sheet

*As seen on Deep Sea Learning with
Georgia Aquarium*

Key Terms:

- **Cartilaginous Fish:** A class of fish, including sharks and rays, having a skeleton made of cartilage.
- **Dentition:** A full set of teeth and their placement within the mouth.
- **Predation:** The act of capturing and feeding upon a prey item.

Diet and Dentition

- A shark's diet and predation style is adapted to their dentition.
- Elongated teeth aid predators in grasping prey items such as fish and invertebrates.
- Teeth with a serrated edge cut and tear dietary items into manageable bites.
- Rays and some sharks use molar-like teeth to crush prey items such as clams, mussels, oysters, conchs and crustaceans.



Image courtesy of National Aquarium



What Do We Know About Sharks?

- Sharks have inhabited the ocean for hundreds of millions of years.
- There are more than 500 species of sharks today (in nine different groups).
- Sharks and rays are a subcategory of cartilaginous fish collectively known as elasmobranchs.
- As effective predators, sharks play a vital ecological role in the marine environment.
 - Their **predation** helps keep many species populations healthy and at an appropriate size, ensuring that the ecosystem's food web is in balance.
- Some sharks are **active predators** meaning they hunt for their food. Others are **passive predators** meaning they are filter feeders like a whale shark.



Image courtesy of Dr. Alistair Dove

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Key Terms:

- **Root:** The portion of a tooth that connects to the jaw.
- **Crown:** The portion of a tooth not connected to the jaw.
- **Serrated:** Having the appearance of the toothed edge of a saw.
- **Permineralization:** The process of fossilization where minerals are deposited in the surface of an item.

Rows of Teeth

- Instead of just one row, like most animals, sharks have several rows of teeth.
- If a tooth in the outermost layer is worn or damaged, it can be spit out and the next tooth will flip forward to replace it.



Why Are Shark Teeth Different Colors?

- Often, color can tell you whether you are looking at a more current specimen or a fossil.
- Teeth that fall to the bottom and are covered with sediment go through a process over time called **permineralization**.
- Occurs as water seeps down through the sediments and over the teeth. Water carries in minerals that are then deposited into open pore spaces in the teeth.
- Depending on which minerals are present, teeth can be found in a wide variety of different colors, ranging from blue/grey to black to orange/red to white to green. (most common minerals are silica and calcite)



Image courtesy of fossilhuntingtours.com