



Aquarium Webcam Resource Kit
Lesson Outline *Sensational Sharks*
3rd-5th Grade

Next Generation Science Standards:

- **3-LS4-3** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- **4-LS1-1** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- **5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Key Words:

- **Conserve:** protect (something, especially an environmentally or culturally important place or thing) from harm or destruction
- **Observations:** the action or process of observing something or someone carefully or in order to gain information
- **Serrated:** having or denoting a jagged edge; saw-like

Supplies:

- *Sensational Sharks* Video
- *Sensation Sharks* Worksheet
- Computer & projector to show Shark Lagoon Webcam:
<http://www.aquariumofpacific.org/exhibits/webcams>

Step 1: Discussion

- How do our bodies collect information about the world around us? *Senses*
- What are our five senses?
- Do all animals sense the same way?
- Today we will learn about shark adaptations, including senses.

Step 2: Play *Sensational Sharks* Video

Step 3: Shark Lagoon Webcam & *Sensational Sharks* Worksheet

- Watch the Shark Lagoon webcam to fill out the Ocean Ranger Sensational Sharks worksheet.
- Worksheet Directions

- What do you notice? Record your shark observations.
- What are you curious about? List questions you have from these observations.
- Shark Diversity: Compare two sharks and record similarities and differences. Why do you think some sharks have different adaptations?
 - *There are over 400 different species of sharks! They live in many different ocean habitats and require different adaptations to help them survive (such as for eating, hunting, swimming, protection, etc.).*
- Match the shark teeth to prey (Answers)
 - Bat Ray- Flat Crushing Teeth- Hard Shelled Animals
 - Leopard Shark- Small Sharp Teeth- Small Fish & Shelled Animals
 - Great White Shark- Serrated Teeth- Large Fish & Seal/ Sea Lions
 - Sand Tiger Shark- Long Pointed Teeth- Medium Fish & Squid

Step 4: Shark Conservation

- Prompt:
 - Why is it important to conserve sharks?
 - *Sharks are essential to the health of our oceans, keeping a balanced food web. Sharks need our help!*
 - *The planet is losing millions of sharks per year due to overfishing (fishing at rates faster than a fish species can replace its numbers).*
 - How can we protect sharks?
 - *In order to protect sharks, research conducted by scientists gives us information on estimated number of a shark species, types of habitats, food they need, and what types of threats they face. This information is then used to make better decisions to conserve sharks (see resources below to supplement).*
 - *One way to protect sharks is to protect the habitat they live in. Marine Protected Areas are like underwater parks, providing safe areas for marine animals like sharks to thrive. They can be found in many places around the country.*
- Have students create a shark conservation poster to educate their family and friends.
- Use the resources below to further investigate Marine Protected Areas, follow tagged white sharks, and learn more about shark conservation.

Resources

- National Marine Fisheries Service: *A closer look at shark conservation.*
http://www.nmfs.noaa.gov/stories/2012/08/08_13_12new_shark_week_splash_page.html
- National Ocean Service: *Marine Protected Areas*
<http://oceanservice.noaa.gov/ecosystems/mpa/>
- OCEARCH: Interactive website provides information on tagged great white sharks for research. <http://www.ocearch.org/#Home>
- Find out more about sharks at the Aquarium of the Pacific's Animal Database:
<http://www.aquariumofpacific.org/onlinelearningcenter>