

Ocean Expert Exchange - Educator Resources

TOPIC: ***Shark Toxicology***

FEATURED EXPERT: ***Laura García Barcia of Florida International University (FIU)***

TARGETED LEARNING STANDARDS:

ELEMENTARY SCHOOL NGSSS:

SC.4.L.17.4: Recognize ways plants and animals, including humans, can impact the environment.

MIDDLE SCHOOL NGSSS:

SC.6.N.1.5: Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.

SC.7.N.1.5: Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.

SC.8.N.4.1: Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SC.8.N.4.2: Explain how political, social, and economic concerns can affect science, and vice versa.

HIGH SCHOOL NGSSS:

SC.912.N.1.1: Define a problem based on a specific body of knowledge; pose questions, conduct systematic observations, examine books and other sources of information to see what is already known, review what is known in light of empirical evidence, plan investigations...

SC.912.L.17.8: Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

SC.912.L.17.20: Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

SUPPLEMENTAL RESOURCES:

- Reading – FIU [She saw a scary shark movie as a little girl — now she studies sharks up close](#) (Middle-High School)
- Reference – NOAA Fisheries [International Affairs - Shark Conservation](#) (Middle-High School)
- Reading – NOAA [How Our Shark Finning Ban Helps Us Sustainably Manage Shark Fisheries](#) (Middle-High School)
- Reading – FIU [Could mercury temper demand for shark fins?](#) (Middle-High School)
- Reading – Mongabay [Mercury with that? Shark fins served with illegal doses of heavy metals](#) (Middle-High School)
- Reading – Shark Defenders [The Adventures of Shark Stanley and Friends](#) (Elementary)
- 360 Video/Virtual Fieldtrip– ANGARI Foundation [Generation Ocean: Sharks](#) (Grades K-12)
- Video – NOAA, Smithsonian Institution & History Channel [Ocean as a Lab: Shark Finning](#) (Grades K-12)
- Lesson – Monterey Bay Aquarium [Shark Anatomy](#) (Grades 3-5)
- Lesson – Monterey Bay Aquarium Research Institute [Shark Tagging](#) (Elementary-Middle School)
- Lesson – Environmental Protection Agency [Mercury Bioaccumulation Tag](#) (Grades 5-8)
- Lesson – NYS Department of Environmental Conservation [Food Web & Bioaccumulation](#) (Grades 6-8)
- Lesson – NOAA Office for Coastal Management [Seafood and Human Health](#) (Elementary-Middle School)