



## EDUCATION GUIDE

### INTRODUCTION

Ask students to define these terms before or after watching this program.

Acoustic

Conservation

Extinction

Marine

Environment

Nautical

Predator

Sustainability



They aim to track down the world's most deadly – yet threatened – sharks, maneuver them onto the cradle of their 126-foot boat and tag each one with sophisticated tracking devices. This hands-on approach of tagging sharks allows them to attach transmitters that deliver data for years.

Fischer and his team are on a mission to help save these sharks from extinction. They aim to solve the worldwide puzzle of where Great Whites and other large sharks gather each year, and to learn more about their patterns of migration and breeding. Fischer's non-profit organization OCEARCH uses the data they gather to create appreciation for marine environments globally and to help save our ocean's giants. This series offers students an excellent opportunity to learn more about the ocean's food chain, threats to marine life and the cutting-edge methods these experts are using to help save the world's shark population.

### CURRICULUM LINKS:

*Shark Wranglers* would be useful for Science and Technology, Ecology, Marine Biology and Oceanography courses and course units. **Due to adult language and intense scenes, educators should watch an episode of the series before recommending it to students.** It is appropriate for mature high school and college students.





## DISCUSSION QUESTIONS

1. Why are Great White sharks threatened with extinction? What role does OCEARCH play in trying to save these sharks from disappearing?
2. What kinds of information can be gathered from tagging sharks? Why is this method so risky?
3. What are some of the major challenges Fischer and his crew face? How do they deal with these challenges?
4. What is a “nautical mile”? How does this distance differ from a regular mile?
5. How would you define the term “marine environment”? What responsibility do you think humans have to preserve our oceans?





## EXTENDED ACTIVITIES

1. OCEARCH has developed a list of simple ways all people can help protect our oceans. Working in groups, have students visit the OCEARCH website and review these guidelines: [www.ocearch.org/PROTECTOUROCEANS.html](http://www.ocearch.org/PROTECTOUROCEANS.html). Then, have students create posters, bookmarks or other visual displays incorporating these tips. Students may also want to create public service announcements or scripts about the importance of protecting our oceans.
2. Shark finning is one of the primary reasons Great Whites are facing extinction. Ask students to write opinion pieces or letters to the editor about shark finning. Do they think this practice should be outlawed? Students can research this issue online or at the library to learn more.
3. Tagging sharks allows Chris Fischer and his team to gather important data about Great Whites. After watching this series, ask students to write 2-3 page essays about shark tagging. What kind of data can Fischer and his team collect? How can some of this research be applied?
4. One of the goals of *Shark Wranglers* is to help communities learn more about sharks and other ocean giants. Ask students to work in groups, creating presentations about Great Whites. These presentations can be designed using PowerPoint or any other format.

## DID YOU KNOW?

- Sharks have six highly refined senses: smell, hearing, touch, taste, sight and electromagnetism. Their most acute sense is smell.
- Great White sharks are the largest predatory fish on earth.
- Sharks lack true bone. Their skeletons are made of cartilage, the same material as human noses and ears.
- Over 200 species of sharks are listed on the World Conservation Union's "Red List" of endangered species. More than 100 species of sharks are being commercially exploited.



### WEBSITES:

Learn more about this series on History.com:

**[www.History.com/shows/shark-wranglers](http://www.History.com/shows/shark-wranglers)**

Visit OCEARCH to learn more about their mission and expedition:

**[www.ocearch.org](http://www.ocearch.org)**

Smithsonian National Museum of Natural History:

**[ocean.si.edu](http://ocean.si.edu)**

**[ocean.si.edu/ocean-life-ecosystems/great-white-shark/life-natural-history](http://ocean.si.edu/ocean-life-ecosystems/great-white-shark/life-natural-history)**

### BOOKS:

Allen, Thomas B. *The Shark Almanac: A Fully Illustrated Natural History of Sharks, Skates, and Rays*. (The Lyons Press, 2003).

Crist, Darlene Trew, et al. *World Ocean Census: A Global Survey of Marine Life*. (Firefly Books, 2009).

Dinwiddie, Robert, et al. *Ocean: The World's Last Wilderness Revealed*. (American Museum of Natural History). (DK Adult, 2008).

Domeier, Michael L., Ed. *Global Perspectives on the Biology and Life History of the White Shark*. (CRC Press, 2012).