

OCEAN EXPERT EXCHANGE EDUCATOR RESOURCES

TOPIC - *The Ecological Importance of Sharks*

FEATURED EXPERT - *Dr. Mike Heithaus of Florida International University*

RELATED LEARNING STANDARDS

OCEAN LITERACY PRINCIPLES - [Principle #5](#): The ocean supports a great diversity of life and ecosystems.
[Principle #6](#): The ocean and humans are inextricably interconnected.

NEXT GENERATION SUNSHINE STATE STANDARDS -

- SC.4.N.1.3:** Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.
- SC.4.L.17.4:** Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.L.17.1:** Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
- CTE-TECED.68.ENTECH.05:** Demonstrate an understanding of the relationships among technologies and the connection between technology and other fields of study.
- CTE-TECED.68.ENTECH.12:** Demonstrate an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- 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.7.L.17.3:** Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
- 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...
- SC.912.N.1.7:** Recognize the role of creativity in constructing scientific questions, methods and explanations.
- SC.912.L.17.4:** Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
- 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.

SUPPLEMENTAL RESOURCES

- Reading - ANGARI Foundation [Meet Mike Heithaus](#) (Grades 5-12)
- Resource Library - Florida International University [Ecological Importance of Sharks](#) (Grades 5-12)
- Resource Library - NOAA Fisheries [Shark Conservation](#) (Grades 8-12)
- Reading - The Conversation [Oceans without sharks would be far less healthy - new research](#) (Grades 8-12)
- Video Short - PBS Digital Studios [Be Smart | What If There Were No Sharks?](#) (Grades 5-12)
- Video Short - Pew Charitable Trusts [Sharks Play Critical Role in Ocean Food Web](#) (Grades 4-12)
- Video Short - National Science Foundation News [How tiger sharks affect Shark Bay's ecosystem](#) (Grades 5-12)
- Video Short - Ocean Care Institute [The Dive | The Importance of Sharks](#) (Grades 5-12)
- Video Short - National Geographic [Sharks and Shorelines](#) (Grades 5-12)
- Lesson - PBS Learning Media [Sharks and Shorelines | Nature Works Everywhere](#) (Grades 6-12)
- Activity - Nautilus Live Ocean Exploration Trust [Get Involved SharkPulse Citizen Science](#) (Grades 3-12)
- Resource Library - Florida International University [Global FinPrint](#) (Grades 8-12)
- App - Florida International University [Everglades Predator Tracker Application](#) (Grades 6-12)
- 360 Video/Virtual Fieldtrip - ANGARI Foundation [Generation Ocean: Sharks](#) (Grades 4-12)