

## OCEAN EXPERT EXCHANGE EDUCATOR RESOURCES

TOPIC - ***Aquaculture for Marine Restoration***

FEATURED EXPERT - ***Dr. Joshua Patterson***

### 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.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.
- SC.6.N.2.3:** Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
- SC.7.L.15.2:** Explore scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
- SC.7.L.15.3:** Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
- 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.8.N.4.1:** Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
- SC.912.L.17.4:** Describe changes in ecosystems resulting from seasonal variations, climate change & 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.
- SC.912.L.17.17:** Assess the effectiveness of innovative methods of protecting the environment.
- SC.912.L.17.18:** Describe how human population size and resource use relate to environmental quality.
- SC.912.L.17.20:** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

### SUPPLEMENTAL RESOURCES

- Reading - The Invading Sea [UF/IFAS, The Florida Aquarium collab. to revitalize coral reefs, marine habitats](#) (Grades 7-12)
- Reading - Frontiers for Young Minds [Fish, Algae, and Oysters: The Winning Trio in Aquaculture](#) (Grades 6-12)
- Reading - The Nature Conservancy [Global Principles of Restorative Aquaculture](#) (Grades 9-12)
- Reading - Society for Conservation Biology [Global principles for restorative aquaculture to foster...](#) (Grades 8-12)
- Reading - Society for Conservation Biology [Achieving conservation and restoration outcomes through...](#) (Grades 9-12)
- Broadcast - Pet Life Radio [Aquariumania | Josh Patterson: Corals and Restoration Aquaculture](#) (Grades 8-12)
- Lesson - Sea Grant North Carolina [Aquaculture History and Overview](#) (Grades 9-12)
- Lesson - The Nature Conservancy [Protecting our Oceans & Ourselves: Coastal Resilience & Restorative...](#) (Grades 8-12)
- Curriculum - University of Florida IFAS [Teach Aquaculture](#) (Grades 8-12)
- Resource Library - The MarineBio Conservation Society [Aquaculture](#) (Grades 6-12)
- Resource Library - Florida Sea Grant [Aquaculture](#) (Grades 6-12)
- Resource Library - National Oceanic and Atmospheric Administration [Aquaculture Literacy Resources](#) (Grades 6-12)
- Resource Library - FL Dept. of Agriculture & Consumer Services [Aquaculture Educator Resources](#) (Grades 6-12)
- Resource Library - UF IFAS [Youth Education | Introduction to Florida Aquaculture](#) (Grades 8-12)
- Resource Library - Maryland Sea Grant [Aquaculture in Action](#) (Grades 8-12)