

## OCEAN EXPERT EXCHANGE EDUCATOR RESOURCES

TOPIC – ***Discovery of Potential Cancer Therapeutics from Marine Organisms***

FEATURED EXPERT – ***Dr. Esther Guzmán of Harbor Branch Oceanographic Institute, Florida Atlantic 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.

**Principle #7:** The ocean is largely unexplored.

### NEXT GENERATION SUNSHINE STATE STANDARDS -

**SC.1-4.N.1.1:** Raise questions about the natural world, use appropriate reference materials that support understanding to obtain info., conduct both individual and team investigations through free exploration...

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

**SC.912.L.17.2:** Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.

**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.1.6:** Describe how scientific inferences are drawn from scientific observations and provide examples...

### SUPPLEMENTAL RESOURCES

- Reading - NOAA Ocean Exploration [A Fish Out of Water Having the Time of Her Life](#) (Grades 7-12)
- Reading - Smithsonian Institution [Five Questions for Shirley Pomponi, Medical Sponge Hunter](#) (Grades 6-12)
- Video Short - NOAA [Ocean Today – Medicines from the Sea](#) (Grades 4-12)
- Video Short - FAU HBOI [From the Ocean to the Pharmacy at FAU's Harbor Branch](#) (Grades 5-12)
- Video Short - FAU HBOI [The Johnson Sea Link Submersibles at FAU's Harbor Branch](#) (Grades 4-12)
- Resource Library - NOAA [Exploring the Blue Economy Biotech. Potential of Deepwater Habitats](#) (Grades 7-12)
- Documentary - WPBT2/South Florida PBS [Changing Seas - Prescription: Oceans](#) (Grades 6-12)
- Lesson - NOAA Ocean Explorers [Chemists with No Backbones](#) (Grades 5-6)
- Lesson - NOAA Ocean Explorers [Living by the Code](#) (Grades 7-8)
- Lesson - NOAA Ocean Explorers [What Killed the Seeds](#) (Grades 7-8)
- Lesson - iDigBio [Diving into Deep Sea Data](#) (Grades 7-12)
- Lesson - NOAA Ocean Explorers [The Benthic Drugstore](#) (Grades 9-12)
- Reading - Scientific American [Hope for New Drugs Arises from the Sea](#) (Grades 7-12)
- Reading - Frontiers for Young Minds [Why Are Scientists Interested in Marine Sponges...?](#) (Grades 7-12)
- Reading - Issues in Science and Technology [Life-Saving Products from Coral Reefs](#) (Grades 9-12)
- Reading - Nature [Drugs from the Deep](#) (Grades 9-12)