



Defenses in the Sea • Study Guide

This webisode was developed specifically for use in education to help teach curriculum-based ocean concepts. In this webisode, Jonathan examines many of the ways animals in the ocean defend themselves from predators including venom, speed, maneuverability, ink clouds and more.

Objectives

1. Introduces viewers to various ways animals in the ocean defend themselves, with examples of each type.

Questions for before watching the program

1. Why do animals need to defend themselves?
2. What are some examples of animals defending themselves? What specific adaptations allow them to defend themselves?
3. Why do fish form schools?
4. What defense does an octopus have? How about a sea urchin?

Discussion for after watching the program

1. The lionfish has become an *invasive species* in the Caribbean. (What's an invasive species?) What makes it possible for this fish to expand into a new range so quickly?
2. Can you think of an animal in the film that actually used another animal's defenses for its own?
3. How does *evisceration* protect a sea cucumber?
4. How does schooling protect fish?
5. A lionfish is *venomous*, but not *poisonous*. What's the difference? How about an animal like a rattlesnake? Venomous or poisonous?
6. Internet research: What is in a Blue-ringed Octopus' venom? How does it work? How does it make the venom?