



# Jonathan Bird's Blue World

## Episode 11 • The Mysterious Hammerhead • Study Guide

Of all the animals in the oceans, the hammerhead shark may be one of the strangest looking. The exact purpose of the wide, flat head is a mystery, but several theories abound. Jonathan travels to the shark-infested waters of the Galapagos in Ecuador to learn about the unusual habits of these sinister-looking sharks. Jonathan swims in schools of hundreds of hammerheads, and yet the sharks ignore him. What are the sharks up to?

### Objectives

1. Explores the reason for the hammerhead shark's head shape.
2. Explains certain shark behaviors, such as aggregations.
3. Introduces cleaning stations and symbiotic partnerships.
4. Introduces the Galapagos Islands.

### Questions for before watching the program

1. What kinds of animals live in the Galapagos both above and below water?
2. What makes the Galapagos special as a habitat? (Hint...how far from other land are they? What is special about the life there?)
3. Why might sharks gather in groups (called *aggregating*)?
4. What are some reasons a shark might have a flat head?
5. Can animals work together or form partnerships? How?

### Discussion for after watching the program

1. What country owns the Galapagos Islands? How far off that country's shore are the Galapagos? Can you find the Galapagos on a map?
2. Why do Scalloped Hammerheads seem to aggregate at Darwin Island? What are they doing? (Hint...think of the angelfish).
3. Why is it unlikely that the wide head of the hammerhead has nothing to do with smell?
4. What do scientists think the flat head of the hammerhead is for?
5. How does biologist Kanesa Duncan get the baby hammerheads to relax in a state of *tonic immobility*?
6. A mutualistic symbiotic relationship is a partnership between two creatures which is good for both of them. Describe the relationship between the hammerhead and the King angelfish. Is it mutualistic? What if anything does each animal get out of the deal?