



Antarctica • Study Guide

In this season finale, Jonathan treks all the way to Antarctica to investigate life south of the polar circle. Along the way he dives in the majestic kelp forests of Patagonia, where crabs rule the sea floor. Once he arrives in Antarctica, his adventures continue. He swims with penguins, dives under an iceberg, meets a massive jellyfish 3 feet across, and has an incredible encounter with a Leopard seal, the apex predator of Antarctica. This incredible half-hour show is both fascinating and beautifully shot.

Objectives

1. Introduces viewers to the marine life that thrives in polar seas.
2. Introduces physics of sea ice and animals that live around it.

Questions for before watching the program

1. Everyone knows that water freezes as 32 degrees F. Can water get colder than that and stay liquid? How?
2. What kind of an animal is a penguin? Penguins have wings, but can't fly. What are the wings for?
3. Can fish live in water that is below freezing?
4. How do you get to Antarctica? Look on a map and find the place where Antarctica is closest to another continent. Where is that?

Discussion for after watching the program

1. Why are icebergs dangerous to ships?
2. What does an Antarctic fish do to keep its blood from freezing when the water is below freezing?
3. There are no sharks in Antarctica. Which animal takes its place at the top of the food web?
4. What causes the dimples on the sides of icebergs underwater? Why do icebergs "fizz" as they melt?
5. Why can't baby penguins swim?
6. Why doesn't kelp need a strong trunk like a tree to grow tall?
7. Internet research: the seas around Antarctica are some of the most biologically productive on the planet. Why?