

# The Field Museum Education Department Presents

## *December: Island Biodiversity* **Educators' Guide**

The Field Museum Education Department develops on-line Educator Guides to provide detailed information on field trip planning, alignment with Illinois State Goals and Learning Standards, as well as hands-on classroom activities to do before or after your visit to the Museum.



## Teachers

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This guide is recommended for grades 5-8 and addresses Science State Goals 11, 12, and 13. This guide focuses on The Field Museum *Pacific Spirits and Traveling the Pacific* exhibitions, as well as *The Year of Biodiversity and Conservation*.

Support for Year of Biodiversity and Conservation programming provided by the City of Chicago, Richard M. Daley, Mayor; Department of Environment, N. Marcia Jiménez, Commissioner.

## Related Exhibition:

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*The Natural Wonders of Madagascar: Photographs by Harald SchÜtz*

Take a look at the wildlife of Madagascar an island so isolated that thousands of animals and plant species call it their only home. Harald SchÜtz beautifully captures wildlife studied by Field Museum Scientist Steve Goodman in color photographs.

*This exhibition was created by Harald SchÜtz in collaboration with The Field Museum.*

## Introduction

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Begin to introduce your students to some basic concepts and the geography of the Islands of the Pacific Ocean. Ask students what land masses surround the Pacific Ocean. Discuss with your students the three different regions of the Pacific Ocean (Melanesia, Micronesia, and Polynesia). Discuss the different types of islands found in the Pacific Ocean. What is a volcanic island? What is a coral island? What is an atoll?

Have your students work in small groups to research the following questions: How and why can some islands sustain human life, while others can't? What types of animal life are present on different types of islands? What types of plant life are present on different types of islands? How do native island peoples communicate, acquire food, travel, and use other island resources?

## Pre-visit Activities:

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1. Divide your students into 3-4 small groups.
2. Ask each group to choose one island or archipelago located in one of the three regions of the Pacific (Melanesia, Micronesia, or Polynesia) and research its history. Students should focus on general information such as location of the island or archipelago in the Pacific relative to the other continents, United States mainland, and Chicago, Illinois. Categorize their island/archipelago by type: atoll, volcanic, continental, coral. List 2-3 examples of plant and animal species that can be found on their island/archipelago.
3. Have students write a short essay describing the history of their chosen island/archipelago including their findings.
4. Ask groups to share with the whole class.

## Field Trip Activities:

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1. Have students imagine it is summer vacation and they are on a beautiful cruise with their families in the Pacific Ocean. Have student imagine that their boat sinks and they become stranded on an island in the Pacific. Take the students to the *Pacific Spirits* exhibition. Ask the students to gather information regarding island biodiversity and environmental conditions. How would they survive if stranded on an island? Have them determine how they would fulfill their basic human needs for food, shelter, and clothing.
  - a. Estimate the size of the island you are stranded on. How do you know? What direction are you facing? What types of tools or resources could you use to help determine your longitude and latitude?
  - b. How are you going to gather food and water? How will you build your shelter? What types of plants and food sources are available to you?
  - c. How will you get off the island? What natural resources could you use or make for your long journey on the Pacific Ocean?
  - d. What other factors do you need to think about and plan for?
2. Ask students to document their findings in a journal by writing a short paragraph, taking notes or by drawing pictures with label copy from the exhibitions.

## Extension Activities:

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Upon caregiver supervision, ask students to read the book or rent the movie *Castaway* (PG-13) to see how one might survive on an island. Have them imagine another ending to the story. How would they have changed the events in the story? Ask them to assess the realism of this storyline, given what they know about island ecosystems. Ask them to provide evidence to support their argument from their field trip.