



What and Where is Puerto Rico?

Summary: Through web site resources, class readings, and hands-on activities students will learn where Puerto Rico is, the geography and vegetation of the island, and understand the history of the commonwealth.

Background Information:

Students in Portage Wisconsin are not often exposed to many outside cultures and events. Students often do not think beyond the borders of their community or town. This lesson is to help students see another part of the world and understand the relationship between Puerto Rico and the United States.

Puerto Rico (PR) is an island in the Greater Antilles in the Caribbean. The island covers 3,515 square miles, about 100 miles (east-west) by 35 miles (north-south). It includes four islands off the coast. It is a mountainous region in a tropical climate.

In 1952, PR officially became a commonwealth of the United States. The status of remaining a commonwealth, becoming a state, or becoming an independent country is highly controversial among Puerto Ricans. The US President is the Chief of State, however, Puerto Ricans do not vote in the US election or pay federal income tax. Puerto Ricans elect a head of government and has a legislative assembly similar to the United States.

PR has a population of about 3.9 million. Most people are densely located near the coast and the area surrounding the capitol, San Juan. Both Spanish and English are spoken on the island, although Spanish is more widely used. The culture has both Spanish and western influence.

The land in Puerto Rico has been heavily impacted by human use. Most of the land has been deforested for cultivation and logging. There is a tropical climate at lower elevations and a sub-tropical climate as you move up in to the mountains, in higher elevation. The island has no native mammals other than the bat. Several species have been introduced, including mongoose, which have impacted native bird life.

Grade Level: 7-8

Goal: Students learn about the history of Puerto Rico, and will be able to compare the tropical vegetation and geography to Wisconsin.

Key Concepts:

- Greater Antilles
- West Indies
- Tropical Vegetation
- Island Origin
- Commonwealth
- Biodiversity

Objectives: Upon completion of this lesson, students will:

- 1) be able to identify Puerto Rico on a world map
- 2) describe the vegetation
- 3) explain the governmental relationship between the US and Puerto Rico

Teaching Location:

Classroom
School Forest or other outdoor area (preferably with trees)

Activity Time:

Preparation: 1 hour
1: 30 minutes
2: 30 minutes
3: 45 minutes
4: 3 - 45 minute periods
5: 1-2 hours (depending on travel time)

Subject Areas for

Infusion: science, social studies, English, EE

Materials:

Activity 1: An Introduction:

- National Geographic *World Regions: North America* book
- *Natural Puerto Rico* book
- Student notes outline

Activity 2: Map Reading

- Puerto Rico map (large)
- Puerto Rico maps, student copies
- markers

Activity 3: History of Puerto Rico

- Computer lab or laptop with LCD projector for whole class presentation
- Student notes outline

Activity 4: Tropical Regions/Mapping Biodiversity

- Global 200 Map (WWF Biodiversity Basics)
- Ecoregion Species Cards (*See Biodiversity Basics*)
- Ecoregion at-a-Glance pages (*See Biodiversity Basics*)
- Secret Message Cards (*See Biodiversity Basics*)
- Scissors
- clear tape or glue
- string
- world maps or atlases

Activity 5: Natural Puerto Rico

- PowerPoint on world population by Victoria Dahlby
- LCD projector and computer
- student journals, pens/pencils
- scavenger hunt list
- first aid kit (just in case)
- whistle, or another attention signal

Set-Up:

Activity 1: An Introduction:

- **make copies** of Student notes outline

Activity 2: Map Reading

- **hang up** Puerto Rico map (large) on wall
- **make copies** of Puerto Rico maps, student copies

Activity 3: History of Puerto Rico

Vocabulary

commonwealth:

a self-governing, autonomous political unit voluntarily associated with the United States, namely, Puerto Rico and the Northern Mariana Islands

tropical: regions within 20° north and south of the equator

Greater Antilles:

An island group in the West Indies that includes Cuba, Jamaica, Hispaniola, and Puerto Rico

archipelago: a large group of islands

Standards:

Science:

B.8.4, C.8.3, C.8.4, E.8.1, E.8.2, E.8.3

English:

A.8.4, C.8.2, C.8.3, E.8.3

Social Studies:

A.8.1, A.8.5, A.8.8, B.8.3, B.8.8

EE: A.8.4, A.8.5,

B.8.2, B.8.3, B.8.5, B.8.10, B.8.12, B.8.15, B.8.23

- **reserve** computer lab or set up laptop with LCD projector for whole class presentation
- **make copies** of Student notes outline

Activity 4: Tropical Regions/Mapping Biodiversity

- **hang up** Global 200 Map
- **make copies** Ecoregion Species Cards
- **make copies** Ecoregion at-a-Glance pages
- **make copies** Secret Message Cards
- **gather** Scissors, clear tape or glue, string, world maps for atlases for student use

Activity 5: Natural Puerto Rico

- Inside: set up LCD projector and computer
- **make copies** of student scavenger hunt list
- Outside: set boundaries in an area for students to explore, preferably in a school forest, local park, somewhere with some diversity of life, bring first aid kit (just in case), whistle, or another attention signal

Procedure:

Activity 1 – 30 min. - Introduction

1. Before Reading: Complete a K-W-L chart on the Caribbean/The West Indies/Puerto Rico. Ask the students what they know about the area or what they *think* they know. This will help them get focused on the topic.
2. Hand out note outlines to follow along with key points: archipelago, West Indies, Greater Antilles, Lesser Antilles, coral reef, volcanoes, hurricanes. Tell students that you are going to read out loud from a book to them and when they hear the topic listed on the page, they should write down key ideas about it. After reading, the class will discuss what they key ideas were.
3. Read out loud to the class West Indies: Islands in the Sun from National Geographic: *World Regions: North America p.34-37*. Use an ELMO to show the book to the class as you read, or at least show pictures after each page to help students understand through visual clues.
4. Return to K-W-L Chart. What can we add in our L (Learned) column? What other questions can we ask now? Go over the outline. What did people pick out as important information? What should we add? Write key ideas on the board.
5. Give students a short time (1-2 min.) to reflect on the West Indies and do a think-pair-share about if they were to go to the Caribbean, what would they do/where would they go/ why? Ask for a few volunteers to share with the class their ideas.
6. Have kids take a short water break or stretch.
7. Ask the question, “If Puerto Rico is an island, that rose up from the ocean floor, how did all the animals and plants get there?” Allow students 3 minutes to brainstorm the answer to this question with a partner. Ask each pair to share 1 idea and record the ideas on the board.

8. Hand out notes outline for the next reading.
9. Read Chapter 1: Where did all these animals come from? from *Natural Puerto Rico*.
10. Revisit ideas on the board. Which were proven right and wrong?
11. Go over notes outline as a class.
12. Wrap-up: Create new K-W-L chart focused on Puerto Rico. Ask students to come up with questions they want to know about the area. This will help lead into the rest of the activity.

Assessment: Check over notes outline, informal and ongoing assessment throughout lesson.

Activity 2 – 30 min. – Mapping Puerto Rico

1. Tape Puerto Rico Map in the front of the room upside down or sideways. (I am writing this lesson using the International Travel Maps Puerto Rico Map, scale 1:190 000)
2. Ask the students to take a look at Puerto Rico. What are some of the things they observe about the island. (Hopefully) one of the students will note that the map is upside down or sideways by looking at the compass rose. Explain the importance of the compass rose on a map and orienting it the correct way when reading a map.
3. Reorient the map the correct way and ask students to make observations again. What do they notice about shape, size, topography, landforms, infrastructure, etc.
4. Pass out student maps (using one from National Geographic Xpeditions website, see references)
5. Ask students to orient their map with north at the top of their desk.
6. Ask students to make observations again. What do they notice about their maps' shape, size, topography, landforms, infrastructure, etc. Which map is more helpful? Why?
7. Ask students to get out four colors of markers or colored pencils. Tell them that they are going to make a map of Puerto Rico focusing more on natural features.
8. First discuss the size of Puerto Rico. Have students record the 3,515 square miles on their paper so they know the area coverage. Then ask students to write in the measurements, approximately 100x35 miles (see background).
9. Ask the students, By looking at the maps, where would you live in Puerto Rico and why? Most students will choose a spot by the water. Talk about the importance of water and farmable land. Then explain to the students that most people (about 3 million) in Puerto Rico do live on the coast, and many on the northern coast by San Juan. The other one million are spread out over the rest of the island.
10. Lead students in coloring in natural features on their maps, like the tropical rainforest, the mountainous region, and the karst country. Include areas of wet forest, dry forest, from the map received at El Yunque.
11. Keep the maps for reference later.

Assessment: Check over maps, informal and ongoing assessment throughout lesson.

Activity 3 – 45 min. – Commonwealth

1. Ask the students, is Puerto Rico its own country? What is it? What is a commonwealth?
2. Write down the definition of commonwealth.
3. Explain that countries have fought over land rights for thousands of years. Everyone want to use the land for a different purpose. We only have a limited amount of land to work with. In 1952 the United States make Puerto Rico and official commonwealth of the country. However, the history is much more involved than that.
4. Students are going to explore two websites that will give then background on the history of Puerto Rico and how Puerto Rico operates today as a part of the United States.
5. Hand out notes outlines for following through the websites.

6. If students have not used the computers before, a basic introduction may need to be inserted here.
7. Visit the sites:
 - a. http://www.americaslibrary.gov/jb/progress/jb_progress_puerto_1.html
 - b. <http://memory.loc.gov/ammem/prhtml/bras.html#Am>
8. After students complete the activities and review the notes outline, return to the KWL chart from activity 1 and add the new information in the L column and ask more questions.

Assessment: Check over notes outline, informal and ongoing assessment throughout lesson.

Activity 4 – Three 45 min. periods – Mapping Biodiversity

This lesson is from the WWF's Biodiversity Basics curriculum. This lesson doesn't focus directly on Puerto Rico, but more on the tropical regions in general and it focuses on where biodiversity is the most dense around the world. It stresses the importance of the tropical region. This lesson consists of students taking part in a mapping activity to explore the world's ecoregions and learn how experts make decisions about which natural areas to protect. This will give students a good foundation of diversity for the next activity. For complete instructions, please see *Biodiversity Basics*, Lesson 23.

Assessment: See lesson for list of assessments.

Activity 5 – 1-2 hours – Natural Puerto Rico

This activity has two parts to it. The first part takes place in the classroom for about 30

minutes. The second part takes place in an outdoor area, preferably with different species.

This part could take from 30 min to 1 1/2 hours, depending on location, travel time, and how in-depth you want students to get.

1. Show students the PowerPoint: Natural Puerto Rico (photos taken during the summer of 2005). (*designed by Dahlby*)
2. During the slideshow, discuss how Puerto Rico landscape differs from Wisconsin's landscape. Create a Venn Diagram on the board or on large butcher paper and have a student record the differences and similarities the two places have.
3. The focus for the presentation is on diversity and dense forest vegetation. Students are going to try to identify numbers of species in different parts of the presentation. Students should be able to get a feel for the island now through what they have learned and now what they are seeing. Using this information, they are going to do a comparison of our region with Puerto Rico.
4. After the presentation have the students complete a scavenger hunt in their area to find things in some of the following categories: largest/smallest, tallest/shortest, colorful/dull, many/few, diverse/monotypic. Have the students come up with some categories as well. The idea is to have them look at extremes and find as many things that fit in those categories as possible. There are several slides in the presentation that depict the same types of categories.
5. **If possible** give each group a digital camera to use to record their findings.
6. Lead the students to the outdoor site and give them a determined amount of time to explore the diversity in their area.
7. When you return to the classroom, tally all of the results on the board in a table. Did some groups find more than others? Why? Did some categories have more than other

categories? What are the overall findings? Is one place more diverse than the other place? What counts for the diversity in the tropics? What factors play into each areas diversity?

Assessment: If you used digital cameras, have the students create a poster or book about their findings on the diversity of the Wisconsin landscape. If you didn't have cameras available, let them choose a medium to explain to you what they learned, it could be through drawing a picture of Wisconsin's landscape and Puerto Rico's landscape, it could be through mathematical equations, it could be through writing a poem. It could be through a play. Allow the students to choose how they show you.

Adaptations: Take breaks often. Breaks often allow ADD students to release some energy and then be able to focus more fully. Students who have trouble taking notes could partner with another student to take turns writing or the teacher can provide a more complete outline for students to fill in fewer words. If a student has vision problems, a 3-D model of the map could be created using clay to outline the borders of the map and create mountainous region. During the computer use, use a computer with speech capabilities to read out loud to the student with reading difficulties. Additionally, during the PowerPoint presentation, incorporate language arts by having students describe what they see in each image. This lesson can be adapted for any outdoor site.

References:

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