

Geography: Mexico and Central America: Teacher's Guide

Grade Level: 5-8

Curriculum Focus: Geography

Lesson Duration: One to two class periods

Program Description

This video focuses on the sensitive ecology and volatile geology of the region. *The Landscape of Mexico and Central America* – Mexico and the countries in Central America occupy a natural land bridge between the United States and South America. *Living With Natural Hazards* – Subject to nature's worst, Mexico endures earthquakes, volcanoes, and the force of El Niño. *Guatemala's Coffee Economy* – The cultivation of a small bean helps fuel an economy in the heart of Central America. *The Disappearing Forests of Panama* – Deforestation, subsistence farming, and the Panama Canal are changing Panama's forests and threatening the habitat for plants and animals.

- The Landscape of Mexico and Central America (6 min.)
 - Living with Natural Hazards (5 min.)
 - Guatemala's Coffee Economy (4 min.)
 - The Disappearing Forests of Panama (4 min.)
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Onscreen Questions

Landscape of Mexico and Central America

- Seven countries make up Central America. How were the borders of many of the countries determined?

Living with Natural Hazards

- Mexico City experiences great damage from earthquakes. What are city planners doing to help prevent this problem?

Guatemala's Coffee Economy

- Why is coffee production important to the economy of Guatemala?
- What are the potential problems for an economy that relies on a single crop?

The Disappearing Forests of Panama

- Why is rapid deforestation taking place in Panama?
 - How might this affect the ecology of the country?
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Lesson Plan

Student Objectives

- Compare and contrast the terrain of Mexico and the Central American countries.
- Understand that geography helps shape the economic and cultural development of a country or region.

Materials

- *Geography: Mexico and Central America* video and VCR, or DVD and DVD player
- Computer with Internet access (optional)
- Geography texts and library resources
- Blank map of Mexico (one per student)
- Blank map of Central America (one per student)

Procedures

1. Open the lesson by talking about the different types of terrain in Mexico and Central America. A good way to present this topic is to view portions of the TLC *Geography of Mexico and Central America* video.
2. Discuss how terrain helps shape the economy and culture of a particular country or region. For example, Guatemala has high mountain ranges with rich soil and heavy rainfall, which creates an ideal climate for growing coffee beans and has made coffee one of Guatemala's main industries.
3. Tell students that they will make maps showing the terrain of Mexico and Central America. Explain that they will receive a blank map of Mexico and a blank map of Central America. On these maps, they must label country names and the following terrain features:
 - Plateaus
 - Valleys
 - Major bodies of water (lakes, rivers, or important canals)
 - Forests (including rain forests)
 - Mountains
4. Tell students that, after they have finished labeling their maps, they will make a chart that has information about these five geographic components for Mexico and each country in Central America:
 - Types of terrain
 - Climate
 - Major economies



- Common natural disasters
 - Environmental issues
5. Discuss ways to organize this information on the charts. One easy way to organize the chart would be to divide a sheet of white construction paper into eight vertical columns and five horizontal rows. Each of the columns would be labeled with a country name: Mexico, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. The rows would be labeled: Types of Terrain, Climate, Major Economies, Common Natural Disasters, and Environmental Issues.
 6. Have students complete their charts individually. Allow room for creativity – students can use any method of organizing the information as long as it is clear and the information is easily read. Give students time in class and as a homework assignment to research and create their maps and charts. Students may use geography texts, encyclopedias and other library resources, and the Internet to conduct their research. These Web sites listed have good information on Mexico and the countries of Central America.
 - http://www.stanford.edu/group/arts/nicaragua/discovery_sp/geography/
 - <http://countrystudies.us>
 - <http://www.volcanolive.com/america2.html>
 - <http://www.mexonline.com/geogrphy.htm>
 - <http://www.letsgo.com/CEAM/00-Discover-1>
 - <http://www.cia.gov/cia/publications/factbook/geos/gt.html>
 7. When students have finished their maps and charts, discuss the countries and their terrains. Which types of terrain are specific to certain countries? Which types of terrain are present in more than one country? How have specific terrain features influenced these countries' economies? (Some examples are the coffee industry in Guatemala, eco-tourism in Costa Rica, or the fishing industry in Mexico's coastal regions.) Discuss ways geography may influence a country's culture and its climate.

Assessment

Use the following three-point rubric to evaluate students' work during this lesson.

- **3 points:** Students actively participated in class discussions; used research materials wisely; correctly labeled all terrain on their completed maps; created well-organized charts that correctly included information on all five geographic components for all eight countries.
- **2 points:** Students somewhat participated in class discussions; used research materials with limited teacher guidance; correctly labeled most terrain on their completed maps; created somewhat organized charts that correctly included information on all five geographic components for five of the eight countries, or three of the five components for all eight countries.
- **1 point:** Students did not participate in class discussions; were unable to use research materials without teacher guidance; incorrectly labeled terrain on their maps or did not complete the maps themselves; created incomplete charts that correctly included



information on all five geographic components for only three of the eight countries, or just one or two of the five components for all eight countries.

Vocabulary

canal

Definition: A manmade waterway used for navigation or irrigation

Context: The Panama Canal took nearly 10 years to build, cost millions of dollars, and took thousands of lives.

deforestation

Definition: The act of cutting down forests in large swathes

Context: Unrestricted deforestation threatens Panama's plant and animal life.

El Niño

Definition: A warm ocean current in the eastern equatorial Pacific region

Context: El Niño has a tremendous impact on the climate of Mexico, Central America, and the United States.

isthmus

Definition: A narrow strip of land surrounded by water that connects two larger land areas

Context: Panama is an isthmus.

plateau

Definition: A large, raised area of mostly level land

Context: Mexico's diverse landscape features deserts, mountains, valleys, and plateaus.

tsunami

Definition: An immense sea wave of unparalleled force created by tectonic effects such as earthquakes or volcanic eruptions

Context: The devastating 1985 Mexico City earthquake created a small tsunami.

Academic Standards

Mid-continent Research for Education and Learning (McREL)

McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit link:

<http://www.mcrel.org/compendium/browse.asp>

This lesson plan addresses the following national standards:

- Geography – Places and Regions: Understands the physical and human characteristics of place; Environment and Society: Understands the changes that occur in the meaning, use, distribution and importance of resources



- Language Arts – Viewing: Uses viewing skills and strategies to understand and interpret visual media; Reading: Uses reading skills and strategies to understand and interpret a variety of informational texts

The National Council for the Social Studies (NCSS)

NCSS has developed national guidelines for teaching social studies. To become a member of NCSS, or to view the standards online, go to <http://www.socialstudies.org>

This lesson plan addresses the following thematic standards:

- Culture
 - People, Places, and Environments
 - Production, Distribution, and Consumption
 - Global Connections
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Support Materials

Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit

- <http://school.discovery.com/teachingtools/teachingtools.html>
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DVD Content

This program is available in an interactive DVD format. The following information and activities are specific to the DVD version.

How To Use the DVD

The DVD starting screen has the following options:

Play Video – This plays the video from start to finish. There are no programmed stops, except by using a remote control. With a computer, depending on the particular software player, a pause button is included with the other video controls.

Video Index – Here the video is divided into four parts (see below), indicated by video thumbnail icons. Watching all parts in sequence is similar to watching the video from start to finish. Brief descriptions and total running times are noted for each part. To play a particular segment, press Enter on the remote for TV playback; on a computer, click once to highlight a thumbnail and read the accompanying text description and click again to start the video.

Curriculum Units – These are specially edited video segments pulled from different sections of the video (see below). These nonlinear segments align with key ideas in the unit of instruction. They



include onscreen pre- and post-viewing questions, reproduced below in this Teacher's Guide. Total running times for these segments are noted. To play a particular segment, press Enter on the TV remote or click once on the Curriculum Unit title on a computer.

Standards Link—Selecting this option displays a single screen that lists the national academic standards the video addresses.

Teacher Resources—This screen gives the technical support number and Web site address.

Video Index

I. The Landscape of Mexico and Central America (6 min.)

Mexico and the Central American countries bridge the United States and South America. From mountains to coastline, tropical rain forests to farmland, discover the terrain of Mexico and Central America.

II. Living with Natural Hazards (5 min.)

Situated at the border of two tectonic plates, Mexico is prone to geological events. Learn about the natural disasters of this area, as well as the weather phenomenon of El Niño.

III. Guatemala's Coffee Economy (4 min.)

Coffee is Guatemala's leading export and an important part of the country's economy. Learn how this crop is farmed and processed before it reaches your cup.

III. The Disappearing Forests of Panama (4 min.)

Panama is home to thousands of plants and animals that are not found anywhere else in the world. Explore Panama's Darien region, the largest rain forest in Central America.

Curriculum Units

1. Mexico City

Pre-viewing question

Q: What are some differences between cities and rural areas?

A: Answers will vary.

Post-viewing question

Q: Why do people migrate to Mexico City from rural areas?

A: Answers may include that many people move for job opportunities or to obtain higher standards of living for themselves and their families.

2. Natural Borders of Central America

Pre-viewing question

Q: How does elevation determine the terrain of a region?

A: Answers will vary.



Post-viewing question

Q: What is the difference between Mexico's northern region and its plateaus?

A: Northern Mexico receives little rainfall because it is a desert. Mexico's plateaus receive more rainfall and have fertile volcanic soil.

3. Mexico's Earthquakes

Pre-viewing question

Q: What are some benefits that come from natural disasters?

A: Answers will vary.

Post-viewing question

Q: Why is Mexico prone to natural disasters?

A: Mexico's location at the border of two tectonic plates – the North American and Cocos plates – makes the country prone to devastating earthquakes, volcanoes, and tsunamis,

4. Tsunamis and Other Disasters

Pre-viewing question

Q: Do you think earthquakes or volcanoes are more deadly?

A: Answers will vary.

Post-viewing question

Q: What kinds of natural disasters does El Niño cause?

A: Causing hurricanes, floods, and droughts, El Niño can have a tremendous effect on the weather patterns in Mexico, Central America, and the United States.

5. A Major Export

Pre-viewing question

Q: How has coffee shaped the economy and landscape of Guatemala?

A: Answers will vary.

Post-viewing question

Q: Why are coffee plants so widely grown in Guatemala?

A: Coffee plants thrive in elevations of about 2,000 to 6,000 feet and need about 60 inches of rainfall a year. Guatemala's high mountain ranges, high rainfall, and rich soil create an ideal environment for growing coffee.

6. Growing Coffee

Pre-viewing question

Q: What do you think Guatemala's economy would be like without coffee?

A: Answers will vary.

Post-viewing question

Q: How are coffee beans processed?

A: High-pressure water separates the coffee beans from their outside husks. Moved and sorted, they're separated again through water. Next, a spinning wheel removes the pulp. After soaking for 40 hours, the ripe beans get washed and dried until they are ready for roasting.



7. The Darien and the Panama Canal

Pre-viewing question

Q: How would global trade be different if the Panama Canal had not been created?

A: Answers will vary.

Post-viewing question

Q: What can be done to stop deforestation in Panama?

A: Answers will vary.