

Maps, Regions, Resources, and Climate Teacher's Guide

Grade Level: 4–6

Curriculum Focus: Geography

Lesson Duration: Three class periods

Program Description

Maps, Regions, Resources, and Climate (1 min.) – Introduces the role of geographers. *Location, Size, and Regions of the United States* (3 min.) – Examines the physical geography of various areas of the U.S. *The Population of the United States* (3 min.) – Delves into the numbers and the density of our country's population. *Major U.S. Land Areas* (3 min.) – Explores the nation's mountains, plains, and volcanic formations. *Major U.S. Bodies of Water and Rivers* (4 min.) – Provides an overview of major lakes and rivers, illustrating their role in the creation of landforms and examining humans' use of freshwater resources. *Biomes* (2 min.) – Describes diverse U.S. biomes along with plant and animal species that inhabit them. *Climate in the U.S.* (2 min.) – Examines types of climate and weather maps geographers use in determining climate patterns. *Land Use: Farming and Ranching* (1 min.) – Explains the concepts of arable and grazing land and their agricultural importance. *Land Use: Coal and Oil* (2 min.) – Explores the country's natural energy resources, including their location, production, and the concepts of renewable and nonrenewable resources.

Discussion Questions

- If you could travel to anywhere in the United State, where would you go? Why?
 - Which do you prefer, city life or country life? Why?
 - Think about a physical map of the U.S. What landforms make up the country?
 - Why might the United States be of special interest to geographers?
-

Lesson Plan

Student Objectives

- Describe various landforms and vegetation within the United States.
- Compare two types of forests.
- Research one of the seven geographical regions, producing a map and a written report on the features of the region.

Materials

- *Maps, Regions, Resources, and Climate* video
- Computer with Internet access
- A large map of the United States
- Leaves, needles, and cones from various types of trees, or pictures of different trees
- Poster board and drawing and painting supplies

Procedures

1. Have students examine a physical map of the U.S. Starting on the East Coast, point to the bodies of water mentioned in the program and ask students to identify them. Do the same with elevations (mountain ranges, valleys, basins) and climate.
2. If you have enough leaves, needles, and cones, give one to each student to observe. If not, have students come to the front a few at a time to look at the leaves.
3. Have students write about what they observed. Ask them to include such details as the species of trees, and whether they are coniferous or broadleaf, evergreen or deciduous. Ask them to determine the type of forest in which these trees grow and in which states beyond their own.
4. Divide students into seven groups and assign each group one region of the United States. The groups will produce a written report about the region including what states it covers, the landforms, biomes, bodies of water, and natural resources located there, what the climate is like (including maximum and minimum temperatures and rainfall), and what kinds of farming and industry support the area. They will also make a poster board-size map of their region, drawing in the state borders, land features, marking major cities and waterways, and using symbols to pinpoint areas of farming and industry. Completed reports may be presented orally and displayed in the classroom.

Provide appropriate resources about the various regions of the U.S. The following Web sites may also be helpful:

Web Sites

View pictures of landforms

<http://vathena.arc.nasa.gov/curric/land/landform/landform.html>

U.S Geological Survey on natural resources

<http://www.usgs.gov/themes/resource.html>

Agriculture in the U.S.

<http://www.usda.gov/wps/portal/usdahome>

http://en.wikipedia.org/wiki/Agriculture_in_the_United_States



Forests

<http://www.fs.fed.us/>

Environment

<http://www.epa.gov/>

State by state energy use

<http://www.eia.doe.gov/emeu/cabs/usa.html>

A list of U.S. rivers

http://en.wikipedia.org/wiki/List_of_rivers_in_the_United_States

Reference maps

<http://fermi.jhuapl.edu/states/states.html>

<http://www.infoplease.com/states.html>

Assessment

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

- 3 points: Students were highly engaged in class discussions; displayed excellent understanding of types of trees and forests; cooperated well in groups; produced a clear, comprehensive report and an aesthetically pleasing, informative map including all the information requested.
- 2 points: Students were somewhat engaged in class discussions; displayed good understanding of types of trees and forests; cooperated fairly well in groups; produced an understandable report and a legible map including most of the information requested.
- 1 point: Students were minimally engaged in class discussions; displayed poor understanding of types of trees and forests; did not cooperate in groups; produced an incomplete report and a map difficult to read including little of the information requested.

Vocabulary

arable

Definition: Describes land that can be used for farming

Context: Between the East Coast and the Mississippi River there is much arable land.

coniferous

Definition: Describes a tree that produces cones and does not lose its leaves; evergreen

Context: Coniferous forests grow in the Pacific Northwest.

deciduous

Definition: Describes a tree that loses its leaves in the autumn

Context: The broadleaf forests of the Eastern and Northern states are deciduous.

demography

Definition: The study of populations

Context: Through demography we learn out how many people live in a region and the particular areas in which they live.

irrigation

Definition: The process of taking water from one place and using it to water crops in another place

Context: In areas where not enough rain falls, farmers have to provide water to their fields themselves through such irrigation methods as sprinkler systems or ditch digging.

Mississippi River

Definition: The longest river in the United States; it flows almost the entire length of the country.

Context: The Mississippi flows through the Plains states, making the land there especially good for farming.

region

Definition: An area of land with specific characteristics, such as climate or landforms, that set it apart from other areas

Context: Geographers divide the U.S. into seven regions.

renewable/nonrenewable resources

Definition: Sources of energy and raw materials that are either limited (nonrenewable) or unlimited (renewable); nonrenewable resources eventually run out

Context: Oil, from which we make gasoline, is a nonrenewable resource.

topography

Definition: How high or low an area of land is compared to sea level

Context: Topographical maps show the different elevations of the land in a region.

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

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



This program addresses the following national standards:

Geography

- Understands the characteristics and uses of maps, globes, and other geographic tools and technologies
- Knows the location of places, geographic features, and patterns of the environment
- Understands the characteristics and uses of spatial organization of Earth's surface
- Understands the physical and human characteristics of place
- Understands the concept of regions
- Understands the characteristics of ecosystems on Earth's surface
- Understands global development and environmental issues

National Council for Geographic Education

The National Council for Geographic Education (NCGE) provides 18 national geography standards that the geographically informed person knows and understands. To view the standards online, go to <http://www.ncge.org/publications/tutorial/standards/>.

This lesson plan addresses the following NCGE standards:

- How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information
- The physical and human characteristics of places
- That people create regions to interpret Earth's complexity
- The characteristics and spatial distribution of ecosystems on Earth's surface

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>

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 nine parts 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, use the navigation key to highlight the icon for that segment and then press Enter or Play 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, use the navigation key to highlight the icon for that segment and then press Enter or Play on the remote for TV playback; 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.

Video Index

I. Maps, Regions, Resources, and Climate

Get an overview of what geographers do and how they apply their methods to the physical features of the United States.

II. Location, Size, and Regions of the United States.

Follow the map to the wide and varied regions into which geographers divide the United States.

III. The Population of the United States

Who are the Americans? Discover who lives here, where they live, and where they came from.

IV. Major U.S. Land Areas

"From the mountains to the prairies ..." See "America the Beautiful" in all its splendor.

V. Major U.S. Bodies of Water and Rivers

From the mighty Mississippi and the Great Lakes to the Colorado River trace the locations and history of our country's abundant waterways.

VI. Biomes

Learn how the diverse U.S. landscape supports a wide variety of plant and animal life.

VII. Climate in the U.S.

How's the weather? Answer this familiar question for areas across the nation by looking at temperature and precipitation maps.

VIII. Land Use: Farming and Ranching

Find out whether the land in your state is suited to growing fruit or corn, or whether it is better for raising cattle.

IX. Land Use: Coal and Oil

Update your knowledge of our two greatest fuel-producing natural resources, where they come from, and how much of each is left.

Curriculum Units

1. Geography Tools and Definitions

Pre-viewing Question

Q: What do you think geographers do?

A: Answers will vary.

Post-viewing Question

Q: Why are geographers especially interested in the United States?

A: The United States has widely varied climates, landforms, and population.

2. Comparing Information about the States

Pre-viewing Question

Q: Which state in the union has the largest land area? The smallest?

A: Answers will vary. The correct answers are Alaska and Rhode Island.

Post-viewing Question

Q: Do more Americans live in urban or rural areas? How did the program show this?

A: More Americans live in urban areas. The program displayed a map in which heavily populated areas were shown in white.

3. Oceans and Waterways

Pre-viewing Question

Q: Name as many rivers as you can that are located in the United States.

A: Answers may include the Mississippi, the Colorado, the Columbia, the Susquehanna, and the Charles.

Post-viewing Question

Q: What do rivers provide?

A: Rivers provide water for drinking and irrigation, electrical power, and transportation for ships.

4. Landforms

Pre-viewing Question

Q: Why do you think the landscape of the U.S. is so varied?

A: Answers will vary.

Post-viewing Question

Q: What is the primary mountain range of the eastern United States? Of the western United States? What falls between them?

A: The Appalachians, the Rockies, the Great Basin.

5. Maps

Pre-viewing Question

Q: What other kinds of maps are there besides road maps?

A: Answers will vary.

Post-viewing Question

Q: What does a topographical map show?

A: A topographical map shows elevation in relation to sea level.

6. Regions

Pre-viewing Question

Q: In what region of the United States is your home located?

A: Answers will vary.



Post-viewing Question

Q: What do geographers consider when creating regions?

A: They consider what various areas have in common, such as climate and topography, as well as plant and animal life.

7. Population

Pre-viewing Question

Q: From what country did your parents, grandparents, or ancestors emigrate to come here?

A: Answers will vary.

Post-viewing Question

Q: What percent of the population is Native American? What are all the rest of the U.S. population?

A: One-and-a-half percent; immigrants

8. Cities

Pre-viewing Question

Q: If you could live in any city in the United States, which one would you choose and why?

A: Answers will vary.

Post-viewing Question

Q: At the beginning of the 20th century most people lived in rural areas; now most people live in cities. What do you think is the reason for this change?

A: Answers may include the fact that more efficient agricultural methods mean less land is used for farming; our culture is now primarily one of buying and selling, rather than growing and making.

9. Climate

Pre-viewing Question

Q: What is the climate like where you live?

A: Answers will vary.

Post-viewing Question

Q: On a map find the various climate regions of the United States. Describe them.

A: The area around the Mississippi and to the east has abundant rainfall; the Western states are dry; the Southern states are, on average, warmer than the rest of the country; and the Northern states have average temperature that are colder than much of the rest of the nation.



10. Plant and Animal Life

Pre-viewing Question

Q: What are some similarities and differences between the animals at your local zoo, the animals you keep as pets, and the animals that live wild in your area?

A: Answers will vary.

Post-viewing Question

Q: What two kinds of forests are mentioned in the program and what is the difference between them?

A: Coniferous forests are composed primarily of evergreens; broadleaf forests are made up of trees that are deciduous.

11. Soil and Water

Pre-viewing Question

Q: Where does bread come from?

A: Encourage students to work backwards from the loaf of bread on the supermarket shelf to the grain in the field.

Post-viewing Question

Q: What crops can grow almost anywhere? Which ones need more specific growing conditions?

A: Potatoes, corn, soybeans and wheat can grow under a number of different conditions. Citrus fruits grow best in warm, sunny climates.

