



#8817

MID-LATITUDE AND POLAR REGIONS

Grade Levels: 5-12

27 minutes

ACADEMIC MEDIA NETWORK 1997

DESCRIPTION

The mid-latitude and polar regions are two of earth's three climatic zones. The mid-latitude, or temperate, regions have definite seasonal changes in temperature and length of days and nights. Polar climates have extremely cold temperatures. Covers the climatic characteristics of the five subregions of the temperate and polar zones, noting also the vegetation, animal and human life, urban centers, and food crops.

ACADEMIC STANDARDS

Subject Area: Geography

- ◆ Standard: Knows the location of places, geographic features, and patterns of the environment
 - Benchmark: Knows the location of physical and human features on maps and globes
- ◆ Standard: Understands the characteristics and uses of spatial organization of Earth's surface
 - Benchmark: Understands principles of location
- ◆ Standard: Understands the physical and human characteristics of place
 - Benchmark: Knows that places can be defined in terms of their predominant human and physical characteristics
 - Benchmark: Knows how the characteristics of places are shaped by physical and human processes
 - Benchmark: Knows the physical characteristics of places
- ◆ Standard: Understands the concept of regions
 - Benchmark: Knows areas that can be classified as regions according to physical criteria (e.g., land form regions, soil regions, vegetation regions, climate regions, water basins) and human criteria
- ◆ Standard: Knows the physical processes that shape patterns on Earth's surface
 - Benchmark: Understands the distribution of different types of climate (e.g., marine climate or continental climate) that are produced by such processes as air-mass circulation, temperature, and moisture
- ◆ Standard: Understands the characteristics of ecosystems on Earth's surface

- Benchmark: Understands how relationships between soil, climate, and plant and animal life affect the distribution of ecosystems
- ◆ Standard: Understands how physical systems affect human systems
 - Benchmark: Knows the ways in which human activities are constrained by the physical environment

INSTRUCTIONAL GOALS

1. To describe the climate, landscapes and life in the mid-latitude and polar regions.
2. To define and compare summer-dry subtropics, humid subtropics, humid continental, marine west coast, mid-latitude steppe and desert, and subarctic climates
3. To investigate the effect climate and landscape has on human populations.

VOCABULARY

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|--|-------------------------------------|
| 1. agriculture | 17. latitude |
| 2. arctic | 18. longitude |
| 3. boreal | 19. maritime |
| 4. climatic regimes | 20. monotonous |
| 5. coastal margins | 21. precipitation |
| 6. commercial and transportation centers | 22. sedge |
| 7. coniferous | 23. steppe |
| 8. continental | 24. subarctic |
| 9. cultivation | 25. subtropics |
| 10. cyclonic | 26. taiga |
| 11. deciduous | 27. topography |
| 12. farmstead | 28. tropic |
| 13. glacially | 29. tundra |
| 14. hemisphere | 30. urban-industrial concentrations |
| 15. humid | 31. vegetation |
| 16. land forms | |

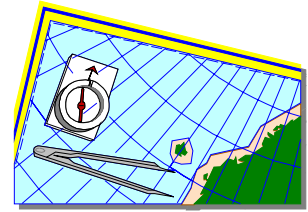
AFTER SHOWING

Discussion Items and Questions

1. Discuss the mid-latitude and polar regions.
 - a. Where are the Earth's middle latitude realms?
 - b. What characterizes the mid-latitude regions?
 - c. What provides a basis for subdividing the middle latitude regions into climatic zones?
2. Discuss the summer-dry subtropics, humid subtropics and humid continentals.
 - a. Where are they located?
 - b. How are these climates marked?
 - c. What is the predominant vegetation of these areas?
 - d. What are the crops of the areas?
 - e. What are the means of earning a living in the areas?
3. Discuss the mid-latitude steppes and deserts.
 - a. What geographical and weather features are typical of these temperate zones?



- b. What range of latitudes, temperatures and precipitation are found in the mid-latitude steppes and deserts?
 - c. Why are lush grasslands and prairies no longer widespread in the wetter parts of these regions?
 - d. Why is there less abundant wild life in the grasslands?
 - e. What would it be like to live in this area where amounts of precipitation vary substantially from year to year?
 - f. What natural resources are there in the mid-latitude steppes and deserts?
 - g. Why are cities in these areas widely separated? Why are smaller towns more characteristic settlements?
4. Discuss the subarctics.
- a. What are the extremes of seasonal temperatures?
 - b. What are the seasonal differences in the lengths of days and nights?
 - c. Why are precipitation rates generally low?
 - d. What do the many water-holding depressions result from?
 - e. Why are trees smaller in size when compared with the same species in a more temperate climate?
 - f. Why are human populations concentrated toward the southern margins of the subarctic?
 - g. Why must timber harvested in the subarctic's boreal forests be carefully planned?



Applications and Activities

1. Research the summer-dry subtropics area of the Mediterranean Sea.
 - a. Why have people long been attracted to Mediterranean shores?
 - b. What civilizations have risen and fell in this climate?
 - c. How have the landscapes along the margins of the Mediterranean Sea been greatly modified by centuries of human habitation?
 - d. What has been the influence of European immigrants to this region over the past four centuries?
2. Compare the major cities of each climatic zone. Consider population, industries, culture, cost of living, transportation, housing, food, clothing and schools.
 - a. Summer-dry subtropics: Rome, Italy; Santiago, Chile; San Diego, California and Capetown, South Africa.
 - b. Humid subtropics: Atlanta, Georgia, USA; Tokyo, Japan; Shanghai, China and Buenos Aires, Argentina.
 - c. Humid continentals: Beijing, China; Budapest, Hungary; Vienna, Austria; Washington D.C., USA; Toronto, Canada: and Berlin, Germany.
 - d. Mid-latitude steppes and deserts: El Paso, Texas.
3. Plan a trip around the climatic zones. Consider an in-depth exploration of one climate zone or an around the world tour touching briefly on each climatic zone.
4. Evaluate each climate zone as a potential place to live. Consider the pros and cons for human habitation for each zone. Judge the effects of each of the following on satisfaction of life:

a. weather	d. living conditions
b. method of income	e. transportation
c. recreation	f. cost of living

5. Identify the climate zone of a local area. Justify the classification.
6. Hypothesize where nations of the world might move their capital cities today if climate were a major consideration. Justify each decision. Consider the following countries:
 - a. United States of America
 - b. Japan
 - c. China
 - d. Russia



RELATED RESOURCES



Captioned Media Program

- Exploring the Diversity of Life #3606
- The Tropics #8933

World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and “kid-safe” sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **SPACE RADAR IMAGES OF EARTH**

<http://www.jpl.nasa.gov/radar/sircxsar/>

Spaceborne Imaging Radar-C/X-Band Synthetic Aperture Radar (SIR-C/X-SAR) is a joint U.S.-German-Italian project that uses a highly sophisticated imaging radar to capture images of Earth.

- **THIS ARCTIC CIRCLE**

<http://arcticcircle.uconn.edu/>

Provides education and information on natural resources, sustainability, history and environmental issues affecting the Arctic region.

- **RIDDLES OF A CHANGING CLIMATE**

<http://tectonic.nationalgeographic.com/2000/physical/climate/main.html>

Includes climatic data and discussion regarding human effect on the world’s climate.