

World Geography
Climates of the Earth
Chapter Three Study Guide

Unit Objectives

- Introduce Geography as a field of study.
- Explain the earth's position in space.
- Be able to explain the many factors that shape of physical world.
- Analyze the interrelationship of all plant and animal life found on earth.
- Examine the processes that shaped the world as we know it.
- Describe the expansion, migration, and development of culture and people.
- Explain how the five themes of Geography are used to describe human activity on earth.

Chapter Four Objectives

- Explain how the Sun affects the Earth's atmosphere.
- Tell how atmospheric pressure distributes energy worldwide.
- Describe how global wind belts affect weather and climate.
- Identify the ways in which the oceans affect climate and weather.
- Identify the common forms of precipitation.
- Describe how the Orographic effect on moving air effects weather and climate.
- Define or explain the concept of the Greenhouse Effect.
- What warnings do the adherents of Global Warming suggest will occur to the earth?
- Explain and identify the different types of cyclonic storms.
- Explain how the three tropical climates differ.
- Analyze the difference between the dry-cold desert and steppe climates, with the dry hot desert and steppe climates.
- List the major Mesothermal (marine) climates and discuss how they differ.
- List the major Microthermal (continental climates and discuss how they differ
- Analyze the differences between the polar Tundra and Ice Cap climates.
- Explain and identify what zonal climates mean when discussing Highland climate.

Meeting Indiana Academic Standards for Geography and History of the World

In this chapter we will cover material that will focus on the following Indiana standards: GHW 1.1, GHW 2.3, GHW 3.2 GHW 4.2, and GHW 6.2. Chapter three covers textbook pages 48 through 67 in the adopted textbook Geography and History of the World©2010 McGraw-Hill.

Additional Help

All classroom activities are available online at

http://www.fdbond.com/Index-World_Geo_Physical.htm

Also, the publisher of the textbook (Glencoe) has the textbook and review activities available at their web site at

http://glencoe.mcgraw-hill.com/sites/0078799899/student_view0

Terms to identify. Using a separate sheet of paper, define each term. Use the definition from the textbook as a place to start, but reword the term using your own words. Be sure to skip a line between terms.

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|----------------------|------------------------|--------------------------|
| 1. Weather | 10. Coriolis Effect | 19. Coniferous (Forests) |
| 2. Climate | 11. Doldrums | 20. Deciduous (Forests) |
| 3. Axis | 12. Current | 21. Mixed Forests |
| 4. revolution | 13. El Nino | 22. Prairie |
| 5. Equinox | 14. Windward (Side) | 23. Permafrost |
| 6. Solstice | 15. Leeward (Side) | 24. Hypothesis |
| 7. Greenhouse Effect | 16. Rain Shadow | 25. Smog |
| 8. Global Warming | 17. Natural Vegetation | |
| 9. Prevailing Wind | 18. Oasis | |

Other Terms to Identify

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|---------------------|------------------------|---------------------------|
| 26. Arid | 36. Horse Latitudes | 45. Safford-Simpson Scale |
| 27. Biomes | 37. Humidity | 46. Savannas |
| 28. Canopy | 38. Hurricanes | 47. Stationary Front |
| 29. Cold Front | 39. Ice Cap | 48. Source Regions |
| 30. Condensation | 40. La Nina | 49. Temperature |
| 31. Cyclones | 41. Occlude Front | 50. Tornadoes |
| 32. Cyclonic Storms | 42. Orographic Lifting | 51. Typhoons |
| 33. Ecosystems | 43. Permafrost | 52. Warm Front |
| 34. Evaporation | 44. Monsoons | |
| 35. Fujida Scale | | |

Questions About Climate

1. How does the Sun affect the Earth's atmosphere?
2. How does atmospheric pressure distribute energy worldwide?
3. How do the global wind belts affect weather and climate?
4. How do the oceans affect climate and weather?
5. Why are temperature ranges greater for locations in the interior of continents than for locations nearer the oceans?
6. What are the common forms of precipitation?
7. What is the difference between El Nino and La Nina?
8. How does the Orographic affect moving air?
9. Describe the different types of cyclonic storms.
10. Place on a map the symbols for the several fronts.
11. Explain how condensation and precipitation is related to temperature change.
12. What determines the direction of movement of storms?
13. Explain how the three tropical climates differ
14. Where latitudinal are the Tropic of Cancer and Tropic of Capricorn located?
15. What does the Tropic of Cancer and Tropic of Capricorn designate?

16. How many solstices occur in a year? What are the dates?
17. How many equinoxes occur in a year? What are the dates?
18. What is a temperate zone? What does this phrase "temperate zone" mean?
19. Where latitudinal would you find the doldrums? What does the phrase mean?
20. What are the three types of constant winds?
21. What are the six major factors that influence climates?
22. What is the specific heat difference between land and water?
23. What are the factors that move ocean currents?
24. What is the earth's tilt in degrees? How does it impact climate?
25. What two factors are the Koppen Climate Classification System based upon?
26. How many climates does the Koppen system break the world into?
27. How does the Koppen Climate System denote precipitation?
28. How does the Koppen Climate System denote temperature?
29. How does the Koppen Climate System denote Major Climate Type?
30. Analyze the difference between the dry-cold desert and steppe climates, with the dry hot desert and steppe climates.
31. List the major Mesothermal (marine) climates and discuss how they differ.
32. List the major Microthermal (continental) climates and discuss how they differ.
33. Analyze the differences between the polar Tundra and Ice Cap climates.
34. Explain and identify what zonal climates mean when discussing Highland.
35. What is the difference between ET and EF climate?
36. What is the difference between BS and BW climate?
37. Know what the major characteristics of Tropical Climate and how Af and Aw, and Am climates differ.
38. Know what the major characteristics of Dry Climate are.
39. Know what the major characteristics of Marine Climate are.
40. Know what the major characteristics of Continental Climate are.
41. What major characteristics of Polar Climate and how do they (ET, EF, and EM) differ?
42. Know specifically the characteristics of Cs, Csa, and Csb climate.
43. What are the differences between Daf, and Daw climates?
44. How do the BSh and BSk climates differ?
45. Explain how the BWh and BWk climates differ.