

Chapter 7 Objectives: "Climate, Weather, and Biodiversity"

1. Distinguish between weather and climate.
 - Summarize how warm fronts, cold fronts, high-pressure air masses, and low-pressure masses affect weather.
 - Describe 5 different factors which contribute to global air-circulation patterns.
 - Describe how ocean currents generally redistribute heat.
 - Describe upwelling and how it might be affected by an El Niño-Southern Oscillation (ENSO).
2. Describe the *greenhouse effect*.
 - List the greenhouse gases (GHGs).
 - State the significance of the greenhouse effect.
 - Describe the general effects of the following microclimates: windward and leeward sides of a mountain, forests, and cities.
3. Describe how climate affects the distribution of plant life on Earth.
 - Describe connections between biome types and the following plants: succulent plants, broadleaf evergreen plants, broadleaf deciduous plants, coniferous evergreen plants.
4. Compare climate and adaptations of plants and animals in deserts, grasslands, and forests.
 - Distinguish among the three major kinds of forests, including biodiversity.
 - Describe how a mountain ecosystem is like an "island of biodiversity."
5. Summarize the distribution of light, salt, and temperature in different aquatic ecosystems.
 - Evaluate the significance of the ecological services of the oceans.
 - Distinguish between coastal zones and open sea.
6. Briefly describe the characteristics and ecological significance of coral reefs.
 - Describe environmental and economic problems of coral reefs.
7. Distinguish between coastal and inland wetlands.
 - Describe the ecological functions performed by wetlands.
 - Describe environmental problems associated with coastal and inland wetlands.
8. List and compare the four zones of a lake.
 - Distinguish between oligotrophic and eutrophic lakes.
9. Define *watershed*.
 - List and distinguish the three zones of a river system.
 - What two watersheds service the Fresno/Clovis area? (Not in textbook!)