

Environmental Science Study Guide

Biomes; Land Ecosystems

Vocabulary

Understand and be able to apply each of these terms.

1. Biome –
2. Climate –
3. Latitude –
4. Altitude –
5. Primary Succession –
6. Secondary Succession –

Critical Thinking

Be able to read, analyze, and give complete answers to questions like these.

1. This unit covers **ecosystems**. What does this term include that communities and populations do not? What does the term **biosphere** include?
2. Label the windward and leeward slopes of the diagram below.

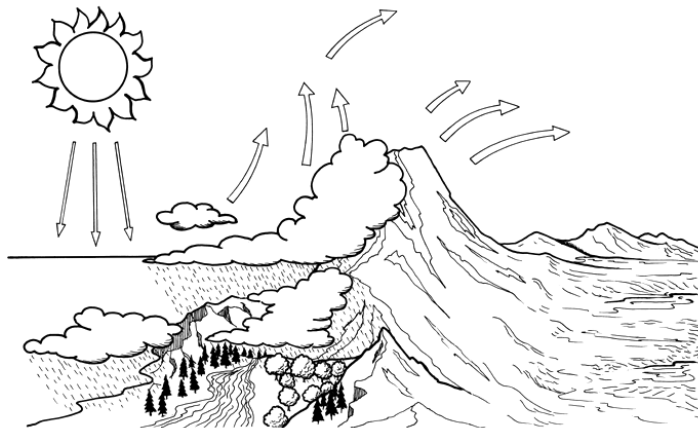


Image from www.fao.org

3. Describe how the **rainshadow effect** can alter the climate of the **windward** and **leeward** sides of a mountain range. Give an example of a type of biome you might expect on each slope.

4. What effect does living near a large ocean or lake have on average air temperatures?

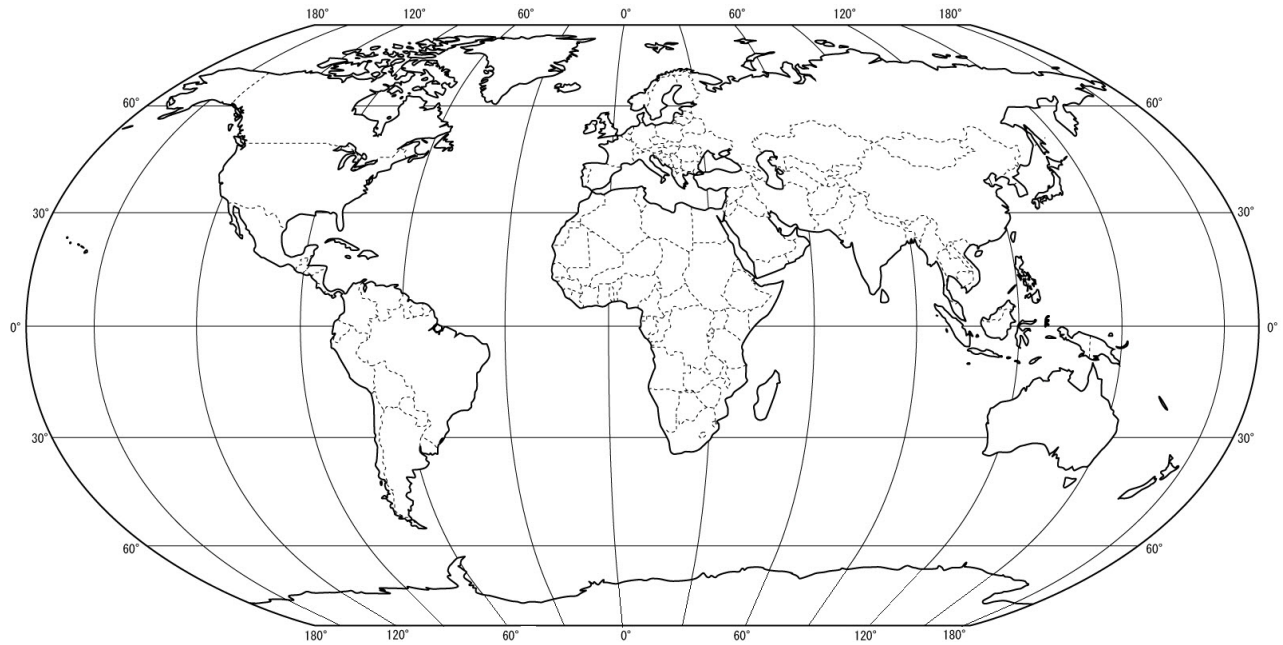
5. Give an example each of a location where **primary succession** and **secondary succession** could occur.

6. Why is primary succession so much slower than secondary succession?

7. Complete this summary chart of the land-based ecosystems.

	Precipitation (High, Low, or Seasonal)	Avg. Temperature (High, Low, or Seasonal)	Important Abiotic Factors
Subtropical Desert			
Coastal Desert			
Rainshadow Desert			
Temperate Desert			
Polar Desert			

	Precipitation (High, Low, or Seasonal)	Avg. Temperature (High, Low, or Seasonal)	Important Abiotic Factors
Savanna			
Prairie			
Tundra			
Tropical Rainforest			
Deciduous Forest			
Boreal Forest			
Temperate Rainforest			



Label each of the following areas on the map:

- The equator (0°)
- The North Pole (90°N)
- The South Pole (90°S)

Shade in and label each of the following areas on the map above.

(These are good to know for reference but you don't need to memorize these exact latitudes for the test).

- The tropics (23°N to 23°S).
- The subtropics (23°N to 38°N and 23°S to 38°S).
- The temperate zone (38°N to 66°N and 38°S to 66°S)
- The Arctic Circle (66°N)
- The Antarctic Circle (66°S)

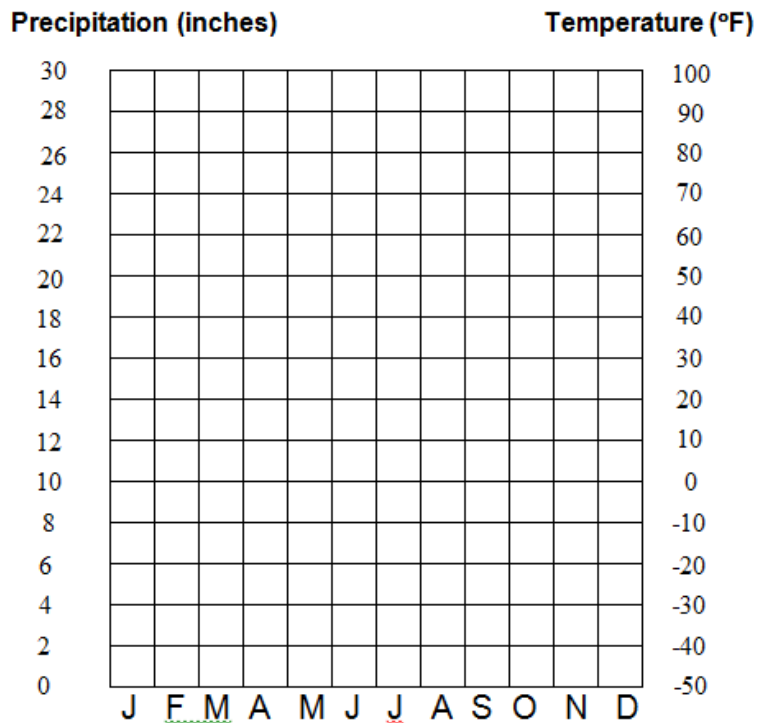
8. Which zone would you expect to find each of the following ecosystems?

- a. Deserts:
- b. Savanna:
- c. Jungles:
- d. Tundra:
- e. Polar Desert:
- f. Deciduous Forest:
- g. Boreal Forest or Taiga:

Climatograph

Use the data provided to construct a climatograph. Temperature should be displayed as a line graph and precipitation as a bar graph.

Month	Precipitation (inches)	Temperature (°F)
January	0.2	-6
February	0.5	-2
March	0.8	-7
April	0.9	28
May	1.1	45
June	1.6	52
July	1.9	50
August	2.4	48
September	1.8	37
October	0.7	18
November	0.5	9
December	0.2	-2



What type of biome do you believe this is? Give specific observations from your graph to justify this answer.