

# Ecosystems Study Guide (Ch. 22, sec. 4)

Name \_\_\_\_\_

Period \_\_\_\_\_

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1. What is a biome? What are the six major biomes studied by ecologists?

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2. Complete this sentence:

It is mostly the \_\_\_\_\_ -- \_\_\_\_\_ and \_\_\_\_\_ --  
in an area that \_\_\_\_\_ its \_\_\_\_\_ .

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3. What are the canopy and understory in a rainforest?

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4. What are deciduous trees?

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5. What are coniferous trees, or conifers?

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6. What is permafrost?

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7. What are four different types of freshwater ecosystems?

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8. What is an estuary? Why are estuaries important?

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9. What are four different types of marine ecosystems?

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10. What is the intertidal zone?

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11. What is the neritic zone?

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12. What are the two zones of the open ocean? What does sunlight have to do with these two zones?

## Know Your Biomes

1. Using the internet, go to <https://earthobservatory.nasa.gov/Experiments/Biome/>
2. Using the temperature and precipitation as a guide, label the biomes.
3. Use the examples and characteristics given in the box at the bottom of this page to fill in the appropriate blanks. (You will need to read the descriptions further down each web page)

TYPE OF BIOME	TEMP/PRECIPIATION	EXAMPLES/CHARACTERISTICS
_____	Temp: Avg. 38°C (day), avg. -3.9°C (night) Precipitation: Up to 25 cm per year	Temperatures can change drastically from day to night _____ _____
_____	Temp: 20°C – 25°C Precipitation: 200 to 1000 cm per year	Two types: tropical and temperate _____ _____
_____	Temp: -30°C to 30°C, yearly avg. 10°C Precipitation: 75 to 150 cm per year	Temperature varies widely from season to season _____ _____
_____	Temp: -40°C to 18°C Precipitation: 15 to 25 cm per year	Almost no trees due to short growing season and permafrost _____ _____
_____	Temp: -40°C to 20°C, avg. summer 10°C Precipitation: 30 to 90 cm per year	Trees grow needles and seed-producing cones _____ _____
_____	Temp: -20°C to 30°C Precipitation: 50 to 90 cm per year	Generally open, continuous, and flat _____ _____

### EXAMPLES AND CHARACTERISTICS

Spruces, pines, and firs	Dense canopy contains giant trees	Broadleaf trees such as oaks and maples
Plants adapted to lack of water	Height of grass depends on rainfall	Winters long, dark, and cold
Trees lose leaves in the fall	Cacti, small bushes, short grasses	Three layers: canopy, understory, floor
Mosses, sedges, lichens	Needles remain on trees all year	Also called prairies, steppes, pampas