

Ch. 4.1 and 4.4 – Ecosystem Study Guide

LESSON 1

- * organism * habitat
- * biotic factor * abiotic factor
- * species * population
- * community * ecosystem * ecology

LESSON 4

- * biome * climate * desert
- * rain forest * emergent layer
- * canopy * understory * grassland
- * savanna * deciduous tree
- * boreal forest * coniferous tree
- * tundra * permafrost

Habitat pg. 109 _____

Organism pg. 109 _____

Species pg. 112 _____

Population pg. 112 _____

Community pg. 112 _____

Ecosystem pg. 113 _____

Ecology pg. 113 _____

Abiotic Factor pg. 109 _____

Biotic Factor pg. 109 _____

Habitat pg. 109 _____

Biome pg. 130 _____

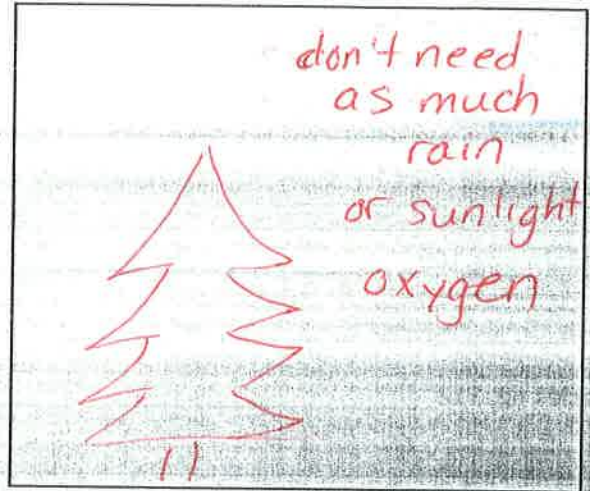
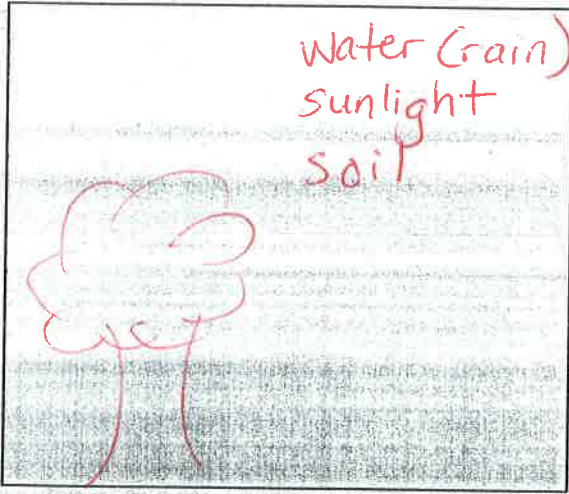
Climate pg. 130 _____

Name _____ Date _____ Class _____

In the boxes below draw a deciduous tree, coniferous tree, and explain the Abiotic factors that allow both trees to survive in their specific habitat.

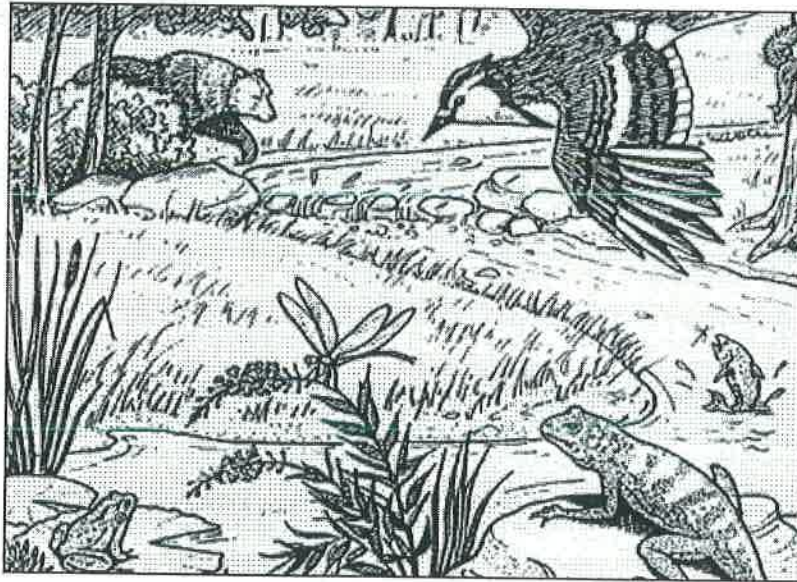
Deciduous Tree

Coniferous Tree



Chapter 4.1 Living Things and the Environment

The drawing below shows an ecosystem. Study the drawing and then answer the questions that follow.



1. Name the biotic factors in this ecosystem.

trees, bushes, blue jay, bear, squirrel, fish, lizard, dragonfly, flowering plant, grass, frog, water

2. Name the abiotic (nonliving) factors in the ecosystem.

soil, rocks, water, sunlight, air oxygen, temperature

Name _____ Date _____ Class _____

3. What ecosystem is pictured above? forest

4. Name an organism listed in the picture above. _____

5. A population is a group of organisms from same species

6. What is the difference between a community and a population? _____

A community is a group of populations

7. List the organisms that make a community in the picture - dragon flies, bears, trout, lizards, birds, trees, cat tails, squirrel, frog

8. Give one example of a population in the picture - oak trees

9. Look at the picture. What things are **NOT** part of the community? rocks, water, soil, air

Chapter 4.4 Biomes

Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. How does climate affect the type of biome found in an area? Temp + precipitation determine plants that grow in a region. Plants determine animals

2. What are two adaptations that enable mammals to survive cold winters? hibernation, thick fur

3. Why are tropical rain forests such rich habitats for many species of animals? Number + variety of plants provide food for many species

4. Why does a deciduous forest have a variety of habitats? Wide variety of plant life

Building Vocabulary
Name each biome described in the table below.

Biome	Climate and Organisms
5. temperate forest	warm summers, cold winters; receives at least 50 cm of precipitation per year, trees shed their leaves and grow new ones each year
6. desert	hot in daytime, cool or cold at night; very dry; organisms are adapted to extreme temperatures and dry conditions
7. boreal forest	warm, rainy summers; very cold winters with heavy snow; trees produce cones with seeds that are eaten by many animals
8. tropical rainforest	warm temperatures do not vary much throughout the year; very wet and humid; greater variety of species than any other biome
9. tundra	extremely cold winters, 10. warmer summers; windy; very dry; no trees, only low-growing plants
10. grassland	receives between 25 and 75 centimeters of rain each year; populated by grasses and many large herbivores

Abiotic Factors

NON-LIVING

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Biotic Factors

LIVING

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. |

Name _____

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Type of Biome	Where can you find this Biome?	What grows there (plants)?	What lives there (animals)?	What are some abiotic factors?	What is the weather/ climate like?
Tundra	Near the top of the Earth. Northern portion of Asia and North America	Short plants, that have adaptations to deal with extreme cold, frozen ground, and short growing season	Animals such as polar bear, walruses, wolves	Short sunlight Cold temps Solid frozen ground White ground Dry Windy	Extremely cold, with little precipitation.
Boreal / Deciduous Forest	Boreal – Just south of the Tundra Deciduous – Just south of Boreal forest. N. America, Europe, and East Asia	Boreal – coniferous/pine/needle trees Broadleaf, coniferous.		Reduced sunlight, Cold temps Deep snow Rainy, Warm Prevent water loss Little population of predators Cold Winters Hot Summers 4 seasons Migrate Hibernation Loss of Leaves	Warm summer Very cold winter Lots of Rain and snow. Long winter nights, Long summer days Cold winter Mild springs/fall Hot Summer 2 nd highest rainfall.
Grassland (cooler) / Savannah (warmer)	Just north of Equator and Just south of the equator. (middle latitudes) Central N. America/Central Asia			Short plants (No trees) Fires Droughts Limited water (not of a lot ground water)	Extremely hot summers. (both) Grasslands (cold winters) Just enough sustain grasses.

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Desert	Sahara – largest North Africa Most of Central Australia Western S. N. America			Little to no water. Dry hot conditions. Limited plants and animals to eat Underground homes Nocturnal Many cold blooded.	Receive less than 25cm or 10 inches of rain. Extremely Hot or Extremely Cold. Hot Deserts get very cold at night
Tropical Rainforest	Along the equator in northern South America, Africa, and South Asia			Lots of Rain 4 layers of trees all very different factors Lots of sunlight Little sunlight Lots of food	Humid Wet
Wetlands (Freshwater)	Scattered throughout Boreal, Deciduous, and Rainforests.			Cold and warm depending on weather Can freeze Fresh water Amount of Sunlight varies	Found in boreal forests, rain forests, and deciduous forest.
Coral Reef (marine)	Along the ocean coasts near the equator.			Warm water temps Lots of sunlight Lots of food Salt water	Water temps average 75 degrees all year.