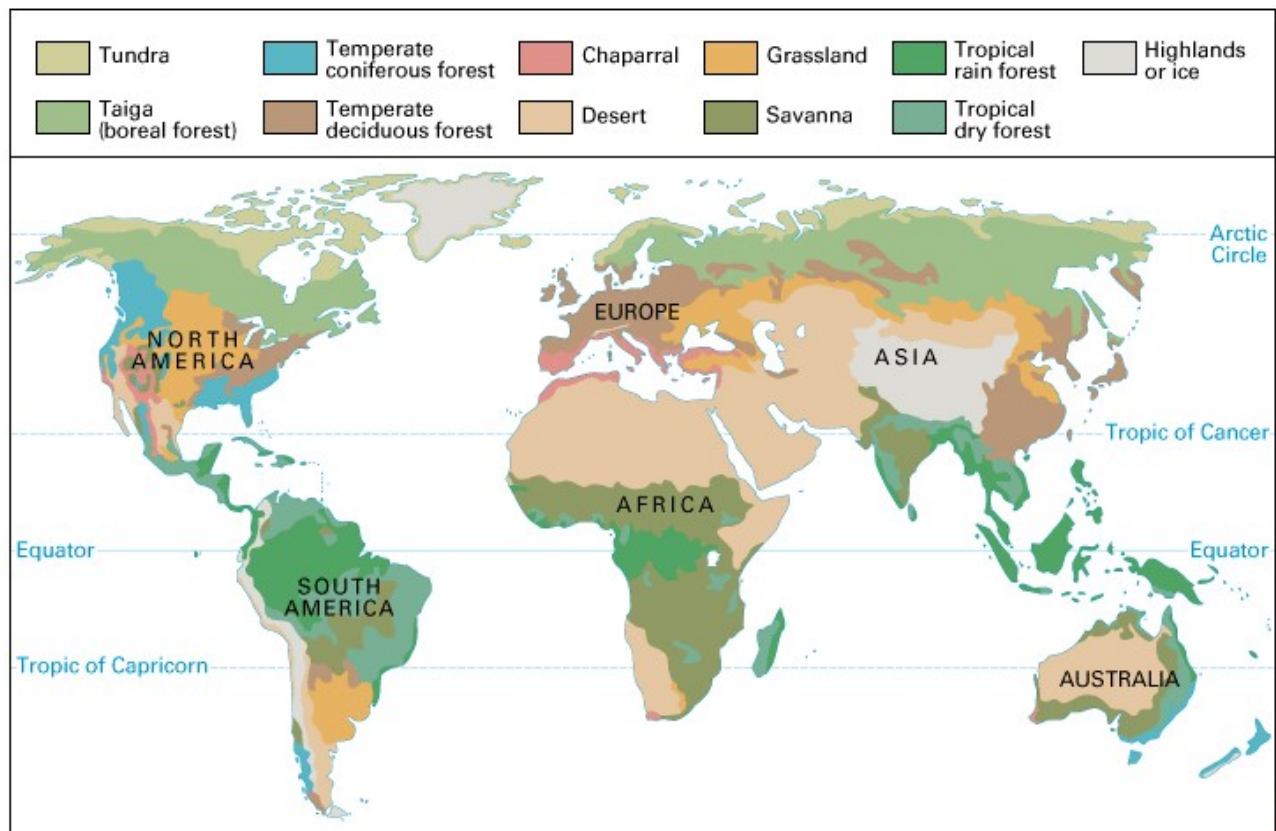




Biodiversity: *Biodiversity* refers to the different kinds of *organisms* in specific *ecosystems* or on the planet as a whole. Biodiversity found on Earth today consists of many millions of distinct biological species, the product of four billion years of evolution. According to E.O. Wilson (the godfather of biodiversity), “biodiversity is the totality of all inherited variation in the life forms of Earth, of which we are one species. We study and save it to our great benefit. We ignore and degrade it to our great peril.”

In order to better understand biodiversity, and why it is so important, during this lesson we will look at various ecosystems found on Earth and learn how the plants, animals and people living in them have adapted to survive. Biologists have developed models that categorize the world’s major ecosystem types, or biomes, based on climate and the predominant vegetation found growing in these areas. Below is one such model representing the world’s major terrestrial biomes:



Assignment: Students will be divided into small groups. Each group will be assigned a different biome to research, using whatever resources available. Each group will make a poster about their biome that will be shared with the rest of the class in a presentation. When creating your posters, remember that “a picture is worth a thousand words.” We’ve included an example poster of our local biome to give you an idea. At a minimum, posters should include the following:

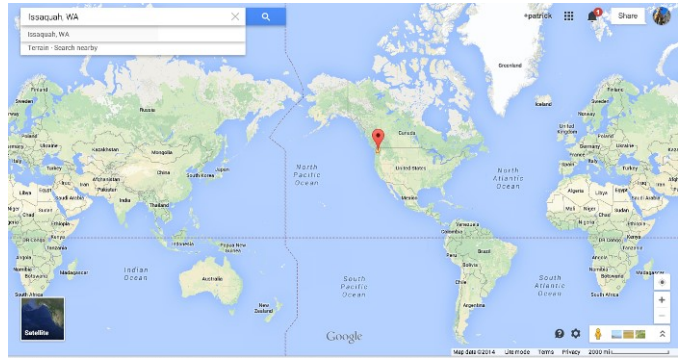
- Name of Biome:
- 1 city or town found within biome
- The soil type found in biome
- 3 - 5 common plants (flora)
- 3 – 5 common animals (fauna)
- Information about the human activity in your biome.

In addition, each group will answer the following questions about their biome:

- 1) Based on what your team learned, what mascot would best represent your team?
- 2) What is the most interesting adaptation (survival strategy) for a plant that your team discovered?
- 3) What is the strangest adaptation for an animal that your team discovered?
- 4) What adaptations have the people in your biome made in order to survive? (Think clothing, food, houses, jobs, etc.)
- 5) Identify at least one threat to the continued existence of your team’s biome.

Biome: Temperate Coniferous Forest

City/Town: Issaquah, WA, USA
Soil type: rich loam, Andisol, "Tokul"



Common Native Flora:



Thuja Plicatata - Western Red Cedar
(bastyr.edu)



Pseudotsuga menziesii - Douglas Fir
(yourdictionary.com)



Polystichum munitum - Western Sword Fern
(commons.wikimedia.org)

Common Native Fauna:



Tamiasciurus douglasii - Douglas's Squirrel
(nationalgeographic.com)



Pipilo maculatus - Spotted Towhee
(commons.wikimedia.com)



Canis latrans - Western Coyote
(wildernesscollege.com)

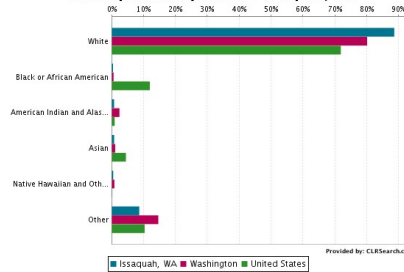
Human Activity:



Historical population		
Census	Pop.	%±
1900	700	—
1910	628	-10.3%
1920	791	26.0%
1930	763	-3.5%
1940	812	6.4%
1950	955	17.6%
1960	1,870	95.8%
1970	4,313	130.6%
1980	5,536	28.4%
1990	7,786	40.6%
2000	11,212	44.0%
2010	30,434	171.4%
Est. 2013	33,566	10.3%

Source: ^[16]
U.S. Decennial Census ^[17]
2013 Estimate ^[18]

2010 Population by Race for Issaquah, WA



Estimated Total Employees by Industry

Industry Type	# of Employees
Construction/Resources	458
Finance, Insurance & Real Estate	643
Manufacturing	1,101
Retail	2,881
Wholesale Trade	1,127
Services	11,862
Public Administration	599
Education	577
Total Employees by Industry	19,248

Source: PSRC Covered Employment 2010

Major Terrestrial Biomes

- 1) Tropical Rain Forest
- 2) Tropical Dry Forest
- 3) Temperate Deciduous Forest
- 4) Temperate Coniferous Forest
- 5) Tropical Grassland/Savanna
- 6) Temperate Grassland/Steppe
- 7) Boreal Forest/Taiga
- 8) Desert
- 9) Tundra
- 10) Chaparral/Mediterranean

Recommended Online Resources:

- <http://www.ucmp.berkeley.edu/glossary/gloss5/biome/>
<http://en.wikipedia.org/wiki/Biome>
http://wwf.panda.org/about_our_earth/
<http://www.worldwildlife.org/science/wildfinder/>
<http://www.thewildclassroom.com/biomes/index.html>
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/?cid=nrcs142p2_054013

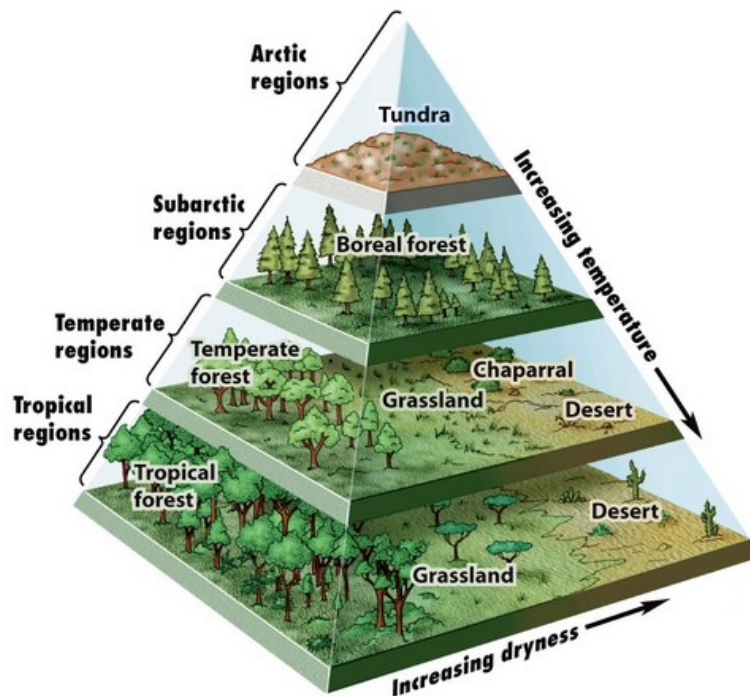


Figure 33-10 Discover Biology 3/e
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Model explaining the relationship between climate (temperature & moisture) and latitude.