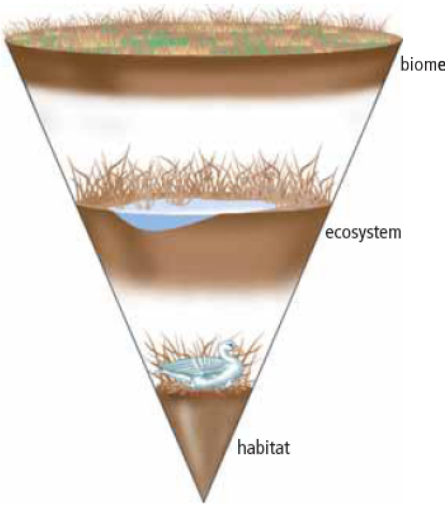
Science 10

Name: _____

Date: _____ Block: _____

# 1.1 Biomes
## p. 8-29

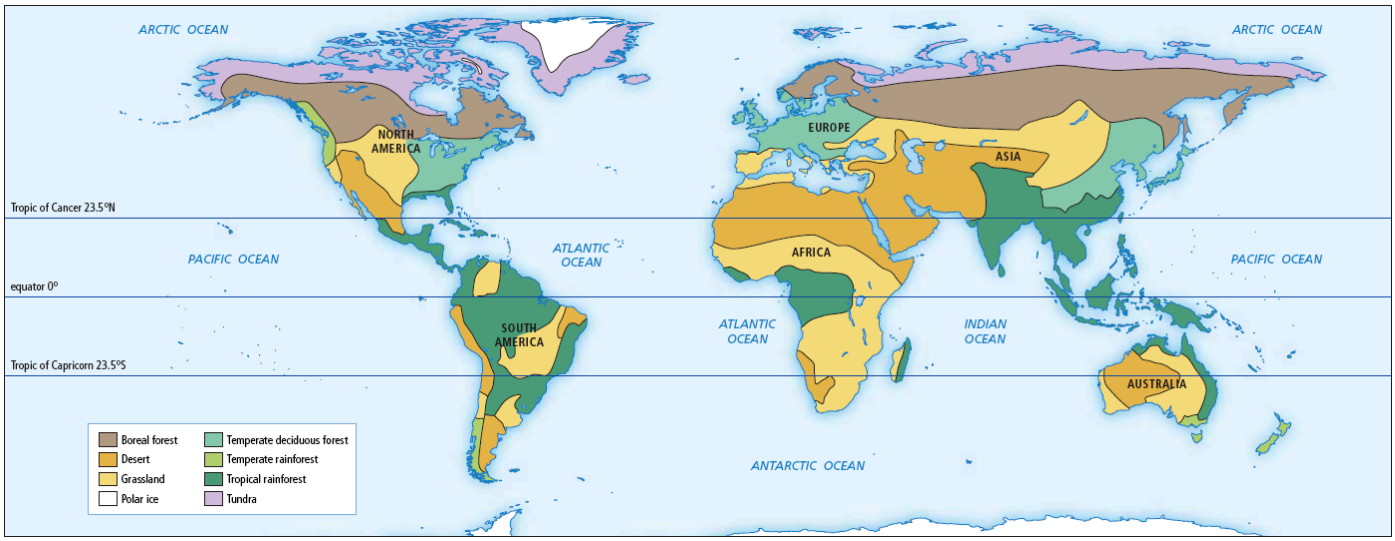



- The word "biosphere" refers to anywhere on Earth living things exist.
  - A biome is a region with similar biotic and abiotic components.
    - Biotic = living things
    - Abiotic = non-living things (air, water, soil, etc.)
  - A biome here in BC can be the same as a biome in New Zealand.
    - If biotic and abiotic conditions are the same, similar biomes can exist far apart.

- In this course, eight terrestrial biomes will be studied.
  - Biomes are classified based on many qualities, such as water availability, temperature, and interactions between biotic and abiotic factors.
  - Boreal forest, desert, grassland, permanent ice, temperate deciduous forest, temperate rainforest, tropical rainforest and tundra.

**Factors That Influence the Characteristics and Distribution of Biomes**

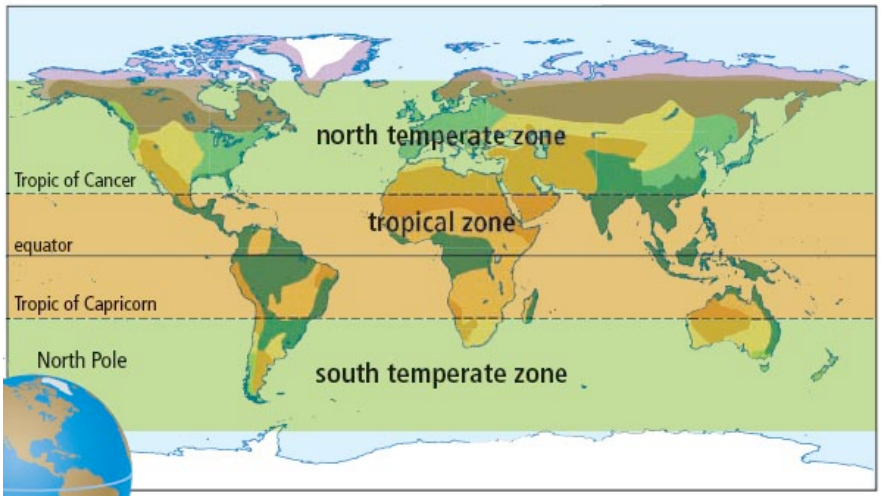
- Certain characteristics help to identify biomes.
  - Temperature and precipitation are two of the most important abiotic factors.
  - Other factors include latitude, elevation and ocean currents.




- Latitude is an abiotic factor that influences biomes.
  - Latitude is the distance north and south from the equator.
  - Latitude influences both temperature and precipitation.
    - The tropical zone has very warm temperatures and high precipitation.
      - The sun shines straight down
      - warm air holds more moisture than cooler air.
  - Elevation also influences biomes.

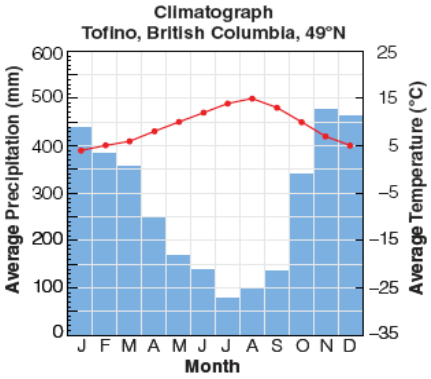
- Higher elevations have less air, and therefore less heat is retained.
- Windward sides of mountains are wet, leeward sides are very dry.

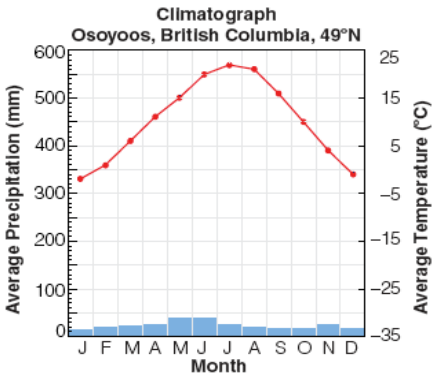
- Ocean currents carry warmth and moisture to coastal areas.
  - Where warm currents meet land, temperate biomes are found.




**Climatographs**

- Climate refers to the average pattern of weather conditions over a period of several years.
- A climatograph shows the average temperature and precipitation for a location over a period of 30 years or more.
- Biomes are often defined using information in climatographs.
- Examine the differences between Tofino and Osoyoos




**Adaptations and Biomes**

- Biomes are often identified with characteristic biotic factors.
  - For example, a cactus in the desert, or a caribou on the tundra.
  - Many of these characteristic factors have special adaptations for that biome.
  - An adaptation is a characteristic that allows an organism to better survive and reproduce.
    1. Structural adaptation - a physical feature that helps an organism survive.
       - A wolf has large paws to help it run in snow.
    2. Physiological adaptation - a physical or chemical event inside the body of an organism that allows it to survive.
       - A wolf maintains a constant body temperature.
    4. Behavioural adaptation - a behaviour that helps an organism to survive.
       - A wolf hunts in packs to capture large prey.

Look to pages 20-28 to read about each of the biomes being studied.