What is a Biome?

- A **Biome** is a term used to describe a major type of ecosystem that can be found in various regions of the world.
- An **ecosystem** is the interaction of plant life, animal life, and the physical environment in which they live.
Why Study Biomes?

Goal
Understand the characteristics and spatial distribution of the different eco-systems.

Central Questions
Where is the Biome located?
What characteristics define the Biome?
- Characterized by long snowy winters, & short marshy summers
- Almost wholly located between 55°N and 70°N
- Not suitable for large plants
  - Growing period
  - Permafrost

Summer Highs: 12°C
Winter Lows: -70°C
Annual Precipitation: 18 -25cm
Taiga

- Characterized by large area of coniferous forests
- Mainly located in sub-arctic regions of northern hemisphere
- Supports many predators and migratory birds

Summer Highs: 21°C
Winter Lows: -54°C
Annual Precipitation: 40-200cm
Taiga
Grasslands
Grasslands

- Located in mid-latitudes in the interior of continents
- Sporadic rainfall and wildfires not suitable for large plants
- Full four seasons
- Can support large herbivores

Summer Highs: 38°C +
Winter Lows: -40°C
Annual Precipitation: 50-88cm
Grasslands
Deciduous Forest

- Located on edge of Coniferous forests (Taiga) in East Asia, Europe, and East North America
- Characterized by broadleaf forests
- Precipitation evenly spread over 12 months

- 4 Definitive Seasons
- Wide variety of Flora and Fauna

Avg Summer Highs: 30°C
Avg Winter Lows: -30°C
Annual Precipitation: 75-150cm
• Located on Costal regions on SW corner of California, the Mediterranean, Australia, Chile, South Africa
• Hot and Dry
• Shrubs grow and can support grazing animals and scavengers

Summer Highs: 40°C +
Winter Lows: 10°C
Annual Precipitation: 35-125 cm
chaparral
desert
• Located mid-continental around tropics and Antarctica
• Characterized as an area that gets less than 25cm of precipitation a year
• Minimal plants and animals

Extreme High Temp: 36°C
Extreme Low Temp: -18°C
desert
- Located in Southern Hemisphere
- Similar to grasslands but able to support more trees
- 6-8 month rainy season followed by droughts and wildfires
- Support large herbivores

Constant Temps between 25°C and 38°C
Annual Precipitation: 50-127cm
savanna
Rainforest

- Located near equator in South America, Africa, and SE Asia
- Near Constant Temps between 20°C and 38°C
- Avg more than 250 cm of rain a year
- Support the most diverse life on earth (50% of all earth’s organisms)
- Lungs of the world (produce 40% of oxygen)
- Cover 6% of world
Rainforest
Alpine refers to Mountainous regions with an altitude of 3000 meters or more.

Located in western North America, western South America, Central and Northern Europe, and Central Asia.

Due to weather the climate is unpredictable. Summer highs reach to about 15°C. Winter will drop below 0°C and normally last oct-may. Some mountains peaks are permanently covered with snow.
Alpine