Lesson 6.2 Biomes

Temperate Forest

- Precipitation spread 
  throughout the year 
  \( \rightarrow \) no distinct wet/dry season

- Varied temperatures (warm 
  summers, cold winters)

- Plants tend to be broad-leafed 
  deciduous, or mixed forest 
  \( \rightarrow \) broad-leafed coniferous

- Soil is enriched with nutrients 
  from annual leaf/needle drop.

- Animals may migrate, 
  hibernate, or store food to 
  survive cold conditions.
Evergreen – remains green year round

Deciduous – sheds or drops leaves at change of season – due to cold or dry season (or needles)
Broadleaf — wide, flat leaves — *kinds* include oak, maple, cherry

Coniferous — needle or needle-like leaves — *kinds* include pine, fir, spruce
Forest Leaf Types

broadleaf
• Examples of tree kinds: oak, maple, cherry

coniferous
• Examples of tree kinds: pine, fir, spruce

hemlock
Stratification (layers) of a forest
Temperate Rain Forest

- Seasonal with much precipitation
- Largest extent found in Pacific Northwest of United States
- Characterized by tall evergreen trees, such as cedars and hemlocks, that don’t lose leaves annually; many are conifers (produce seed-bearing cones)
- Forest floor is shaded, damp, covered in moss.
- Animals that require moisture, such as amphibians, thrive here.
Rain Forest Biomes

Tropical rain forests are wet, warm biomes that contain an amazing variety of plants and other organisms.
Tropical Rain Forest

- Year-round warm temperatures and at least 2 m (6.6 ft) precipitation a year
- Soil generally nutrient-poor
- Forest canopy, emergent layer, and understory support enormous variety of plants.
- Plants tend to have large, flat leaves and shallow roots.
- Supports more animal species than any other biome; animals tend to be highly specialized.

Did You Know? Some tropical plants (epiphytes) grow high on other plants to access sunlight and do not touch the soil.
Tropical Dry Forest

• Warm year-round, but rainfall highly seasonal → wet/dry seasons

• Most trees are deciduous—they lose their leaves and cease photosynthesis part of the year.

• Plants and animals exhibit adaptations (e.g. waxy leaf coating, deep roots, estivation, migration) that enable them to survive the dry season.

Tiger (Panthera tigris)
Boreal Forest (Taiga) Biomes

- most of the trees are **coniferous**
- produce their seeds in cones
- leaves shaped like needles
- Long winter and short summer
Boreal Forest (Taiga)

• Nutrient-poor, slightly acidic soils
• Relatively low species diversity (Low biodiversity)
• Coniferous trees with short, waxy needles and adapted to harsh, snowy conditions
• Animals: year-round residents tend to have thick insulation and small extremities that maintain heat.