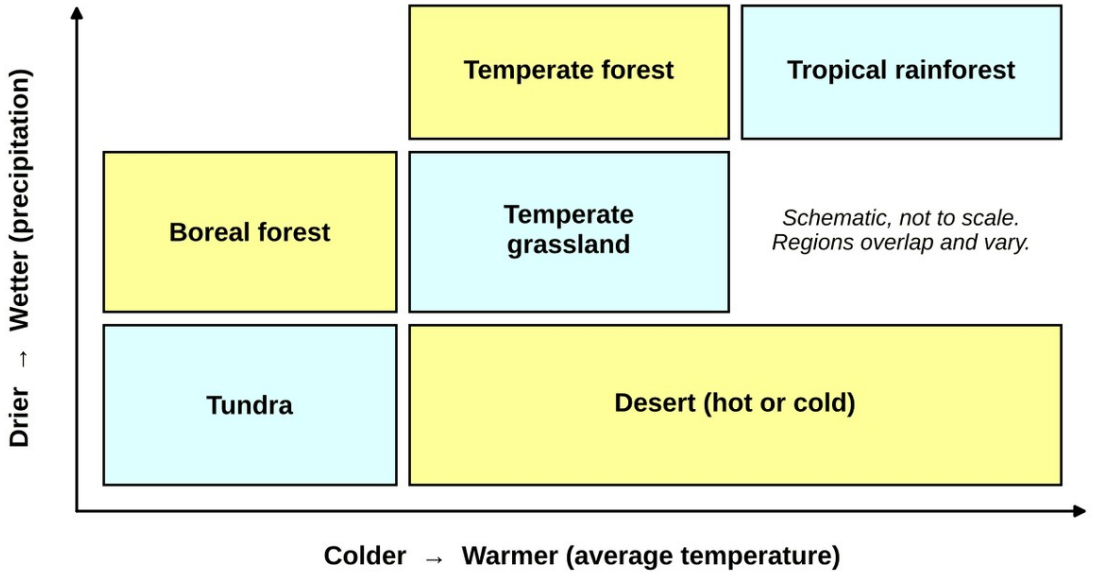
Essential Question

How do climate and soil shape the communities on land?

Terrestrial Biomes

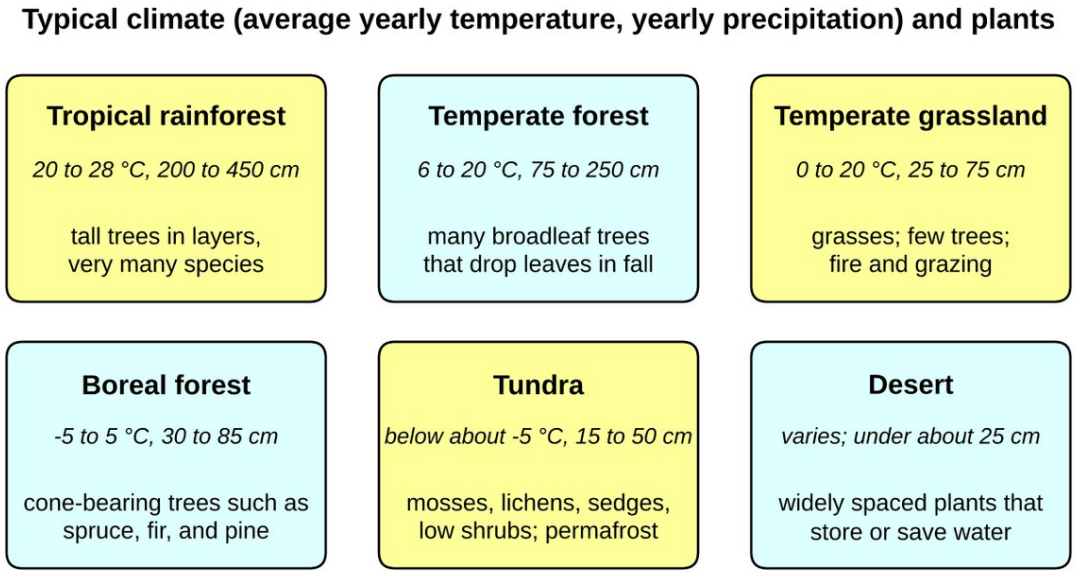
What Is a Biome?

- Biome: a large region with a similar climate and similar kinds of plants
- Temperature and precipitation are the main factors
- Boundaries between biomes overlap and vary



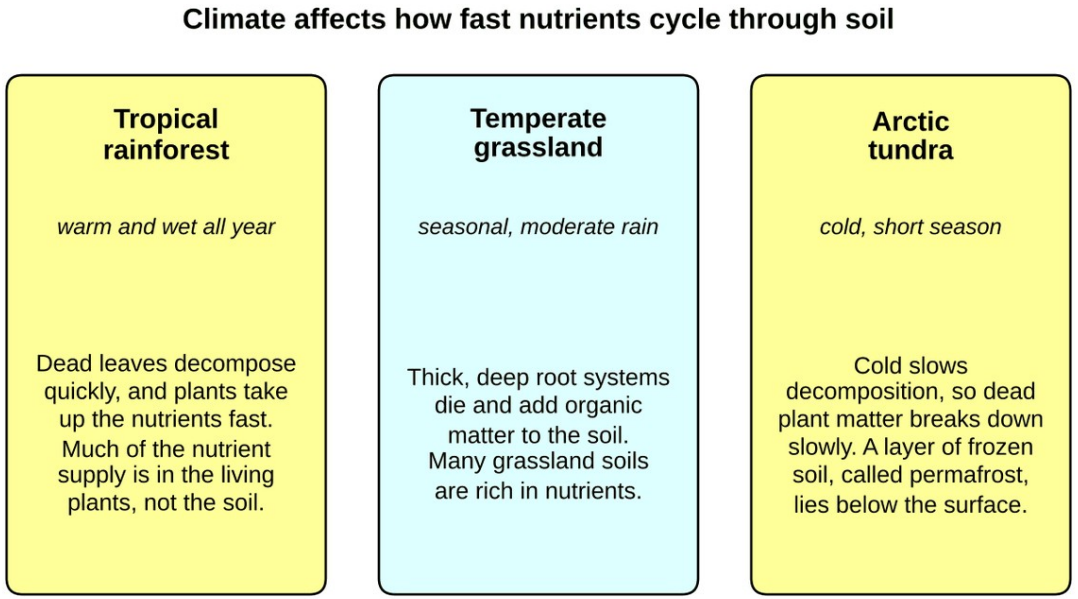
Climate and Traits of Six Biomes

- Rainforest: warm and very wet
- Temperate forest and grassland: seasonal
- Boreal forest and tundra: cold
- Desert: very dry
- Ranges are approximate and overlap



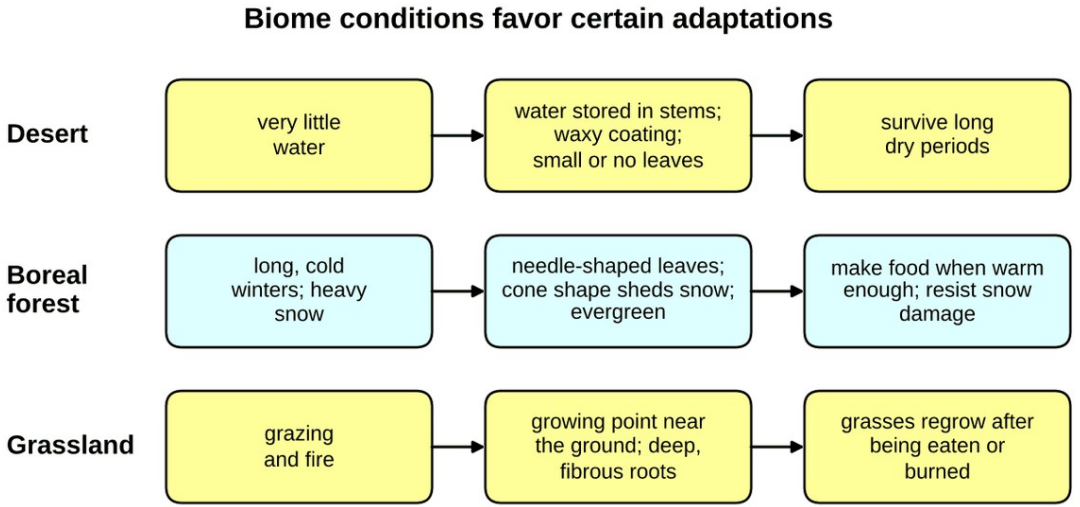
Soil and Nutrients

- Climate affects how fast dead matter decomposes
- Decomposition returns nutrients to the soil
- Rainforest: nutrients are held mostly in living plants
- Grassland: deep roots build rich soil
- Tundra: cold slows



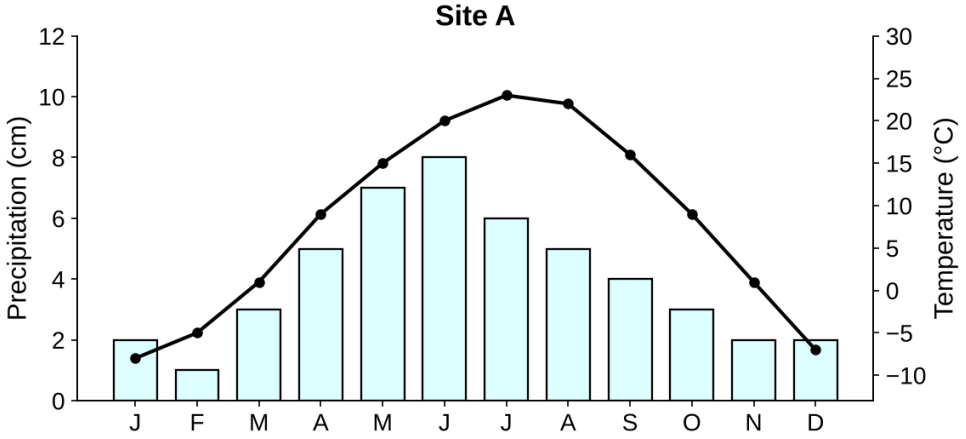
Adaptations to Climate

- Adaptations fit organisms to their conditions
- Desert plants save water
- Boreal conifers shed snow
- Grasses regrow from near the ground



Example: Which Biome Fits Site A?

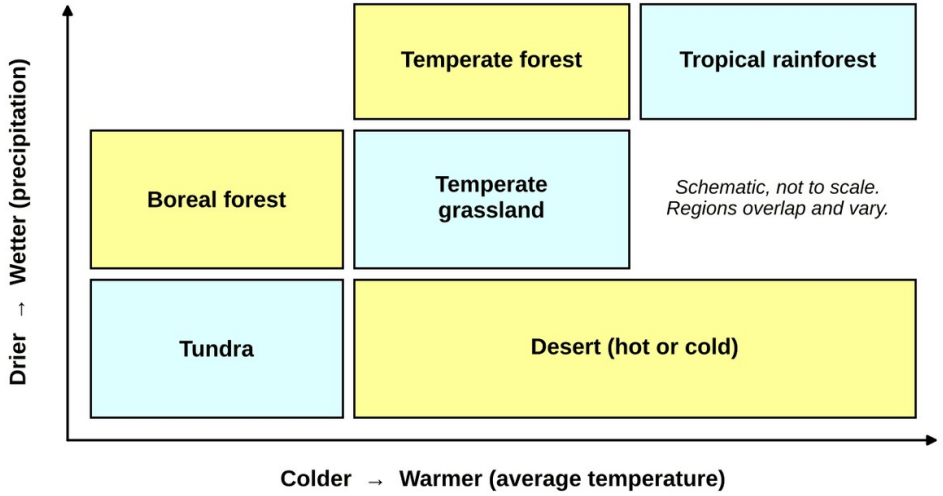
The climograph shows sample data for Site A. Bars show precipitation each month and the line shows average temperature. Find the average yearly temperature and the yearly precipitation, then use the biome cards to decide which biome fits best. Write a claim, evidence, and reasoning.



Sample data. Bars: precipitation. Line: temperature.

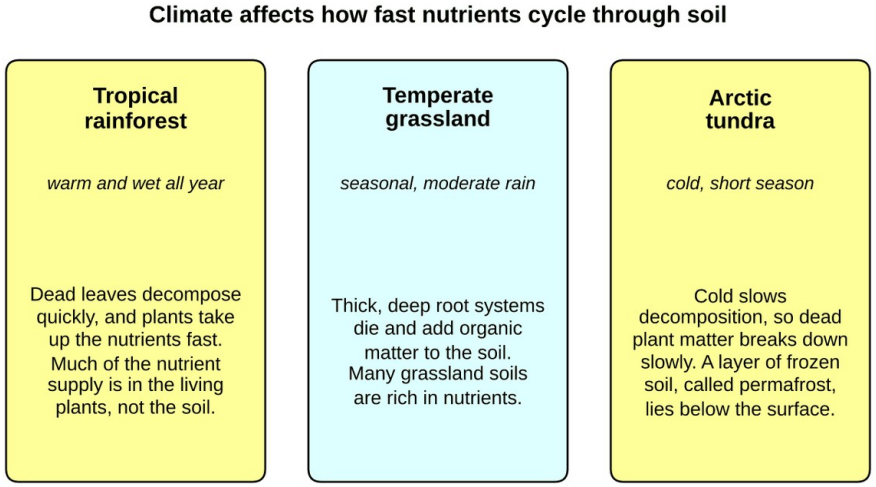
Example: A Region Gets Drier

Use the grid model. A region is a temperate forest. Over many years its climate stays mild, but precipitation falls well below the forest range. Predict which biome the climate would then fit, and explain.



Example: Farming Cleared Rainforest

Use the soil model. Farmers clear and burn part of a rainforest and plant crops. The first crops grow well, but yields often drop after a few years. Use the model to explain why.



Terrestrial Biomes

Big Ideas

- A biome is a large region with a similar climate and plants
- Temperature and precipitation are the main factors that sort biomes
- Biome boundaries overlap, and soil, fire, and grazing also matter
- Climate sets how fast nutrients cycle through soil
- Adaptations fit organisms to the conditions of their biome