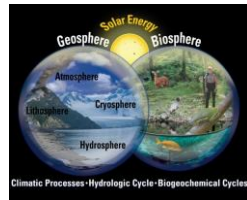
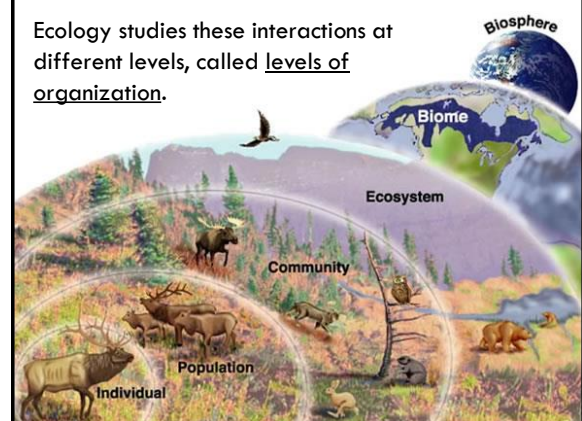


## Introduction

- Life on earth is the result of interactions between biotic (living) and abiotic (non-living) factors.



Ecology studies these interactions at different levels, called levels of organization.

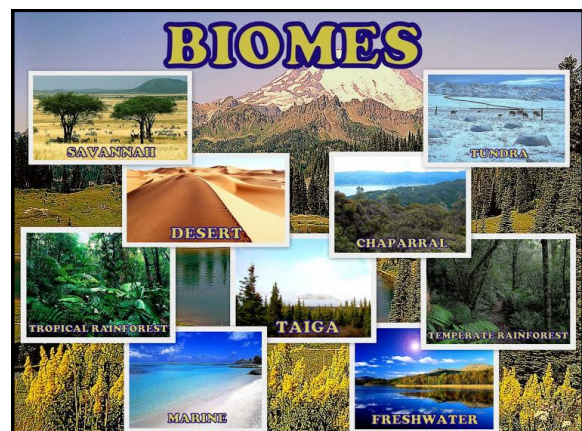


| Level of Organization | Definition   | Example                                    |
|-----------------------|--|--|
| Species               | individuals that can breed with one another        | <br>Bison                                  |
| Population            | all the individuals of the same species in an area | <br>Bison herd                             |
| Community             | all the different species in an area               | <br>Hawk, snake, bison, prairie dog, grass |

| Level of Organization | Definition  | Example  |
|-----------------------|---|--|
| Ecosystem             | the community plus the physical factors in an area                                    | <br>Hawk, snake, bison, prairie dog, grass, stream, rocks, air |
| Biome                 | large area that has a particular climate and particular species of plants and animals |  |
| Biosphere             | the part of the earth that supports life  | <br>Biosphere  |

## Biomes

- are classified based on the dominant plants and animals that live in a certain area
- Eg. The Hot Desert (yes there are cold deserts!) biome is characterized by:
- Vegetation such as cacti, small bushes, low grasses
  - Animals such as nocturnal reptiles, burrowing mammals

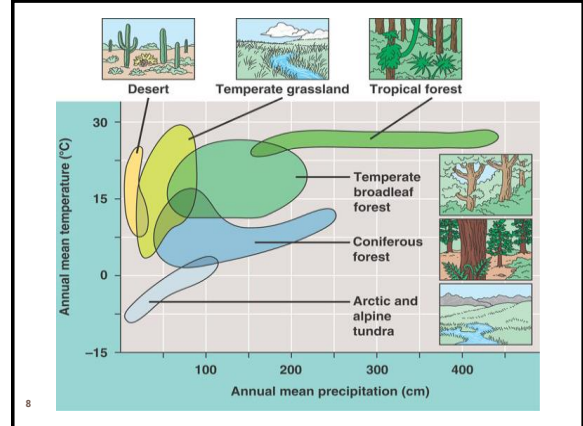


## Biomes

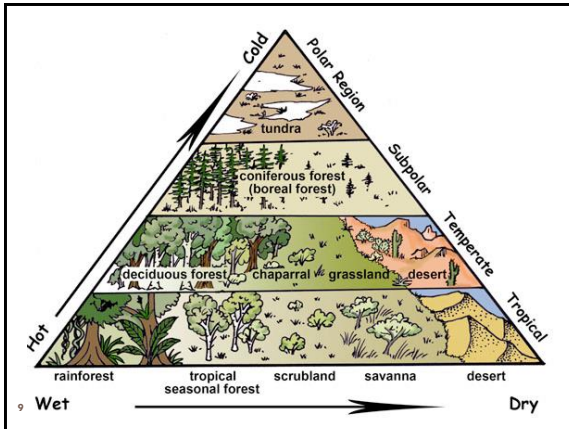
7



- The types of plants and animals that can live in a certain area is determined by the climate.
- E.g. The warm temperature & lack of precipitation in a desert biome is what allows cacti to flourish.



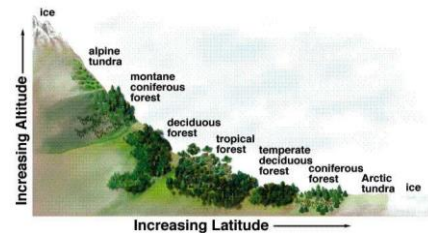
8



## Distribution of Biomes

10

- Areas of the Earth at similar latitudes and altitudes have similar temperatures and precipitation = similar Biomes!



11

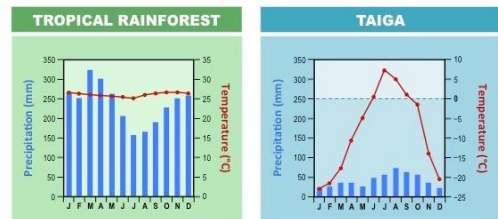
- Eg. Canada & Russia have the Boreal Forest (Taiga) biome because they are similar distance from the equator and have similar vegetation and wildlife



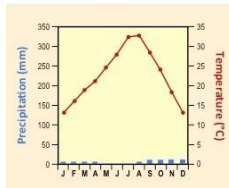
## Representing Biomes

12

- Biomes are often defined using information from climatographs.



Can you guess which biome is represented below?



Is it (a) Desert or (b) Taiga?  
Why?