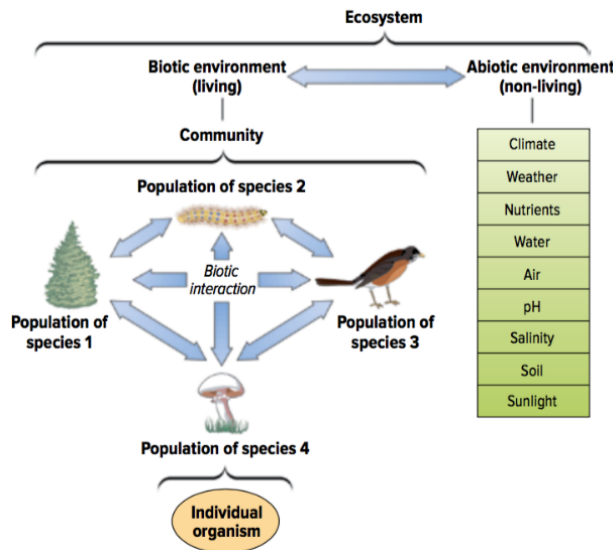


1. Living vs Non-Living Organisms
2. Limiting Factors
3. Carrying Capacity
4. Earth's Spheres

## Living vs Non-Living Organisms

An individual living thing (like an animal or a plant) is called an organism. In order to be classified as a living organism, these individuals must display all of the following characteristics:

1. Made up of one or more \_\_\_\_\_
2. Respond to \_\_\_\_\_ in their environment
3. Need \_\_\_\_\_
4. \_\_\_\_\_ (at a cellular level)
5. \_\_\_\_\_
6. \_\_\_\_\_
7. Eliminate \_\_\_\_\_



In an environment, there will be a mixture of both living and non-living things.

- \_\_\_\_\_ parts of an environment are called \_\_\_\_\_
- \_\_\_\_\_ parts of an environment are called \_\_\_\_\_

Both biotic and abiotic factors are important within an environment. Biotic and abiotic parts of an environment are \_\_\_\_\_ through ways that they \_\_\_\_\_ with one another.

### Why are abiotic factors important?

Abiotic factors help the biotic factors \_\_\_\_\_ in their environment.

Example:

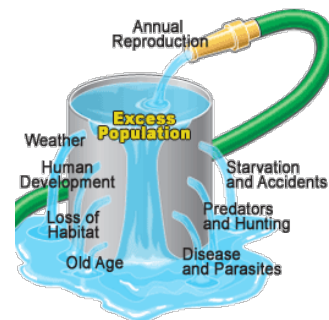
- Oxygen allows animals to breathe
- Rocks help fish hide
- Water gives fish a home

## Limiting Factors

\_\_\_\_\_ are factors that control how \_\_\_\_\_ a \_\_\_\_\_ can be in its environment. These factors can be either \_\_\_\_\_ or \_\_\_\_\_ factors. Limiting factors usually occur when there is a \_\_\_\_\_ of a particular \_\_\_\_\_

Example:

- If there is not enough food for predators, food becomes a limiting factor
- If there is not enough space for a large number of deer in an environment, space becomes a limiting factor
- If there is not enough sunlight for plants to photosynthesize, sunlight will become a limiting factor



## Carrying Capacity

Limiting factors will determine the \_\_\_\_\_ of a population within an environment. Carrying capacity is the \_\_\_\_\_ of \_\_\_\_\_ an environment can support. It can be referred to as the average population size in a habitat.

- The population size can be limited by environmental factors such as amount of food, space for shelter, amount of available mates, etc. (limiting factors)

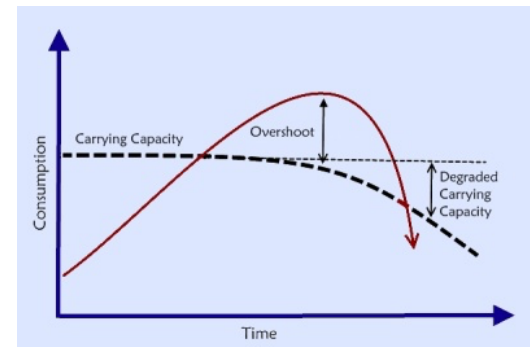
Example:

A piece of land can support a maximum amount of 10 animals.

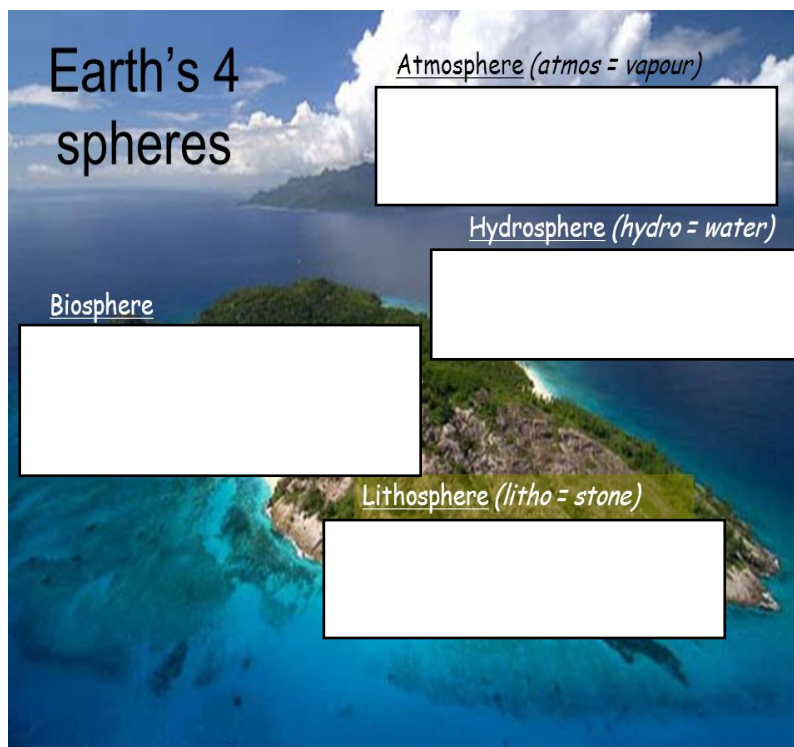
- Scenario 1: The population is at 20 animals. These animals will starve as there is not enough food
- Scenario 2: The population is at 9 animals. These animals will eat well.
- Scenario 3: The population is at 10 animals. These animals can eat enough to survive.
- Scenario 4: The population is at 11 animals. These animals will starve some and the environment *degrades* which causes the carrying capacity to reduce. This can eventually cause starvation.

Some key terms:

- \_\_\_\_\_: The *largest population* an area can support with its resources (i.e. food, water, land)
- \_\_\_\_\_: When the population in an environment exceeds (goes over) the carrying capacity.
- \_\_\_\_\_: This will occur when the resources in an environment is destroyed or degraded (deteriorate; break down) which will then lower the carrying capacity.



## Earth's Spheres



\*\*\*Note: Lithosphere can also be called geosphere