

Population Dynamics

What is it?

Vocabulary:

Population Dynamics:

organisms and their environment have their own ways of limiting populations which keep the ecosystem in balance.

Carrying Capacity:

the maximum population of a species that can be supported by an ecosystem.

Limiting Factors:

factors that affect the carrying capacity of the ecosystem.

-limit population growth.

What do you think are some examples of these factors? What could limit a population's ability to grow?

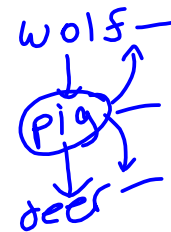
There are **4 limiting factors** that determine the **carrying capacity** of an ecosystem.

1. Nutrients and Energy

-the primary source of energy to organisms is the sun.

2. Number of Organisms (Predators and Prey)

-number of organisms in the trophic levels above or below. (predators and prey)



3. Competition

-the need for the same resources between organisms.

Intraspecific competition (competition among members of the *same species*)

Interspecific competition (competition between *different species*)

4. Density

-amount of space needed for each organism

-*population density* (the number of individuals within a population for a given area)

-*density dependent factors* (overcrowding can cause stress, disease, more reproduction, competition, etc)