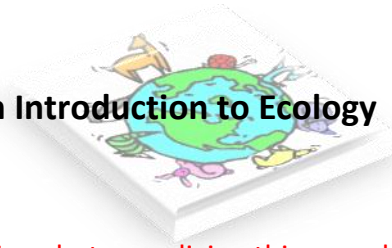


An Introduction to Ecology



- What is ecology?

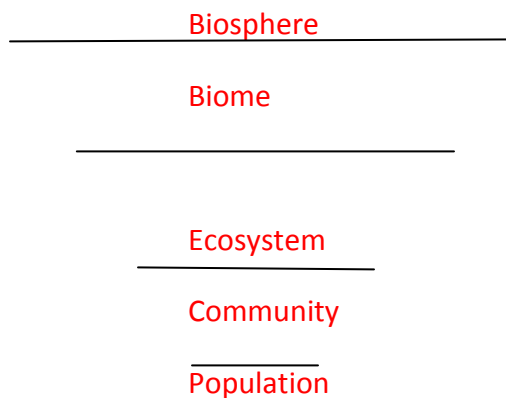
Ecology is the study of the interactions between living things and with their nonliving environment

Levels of Organization

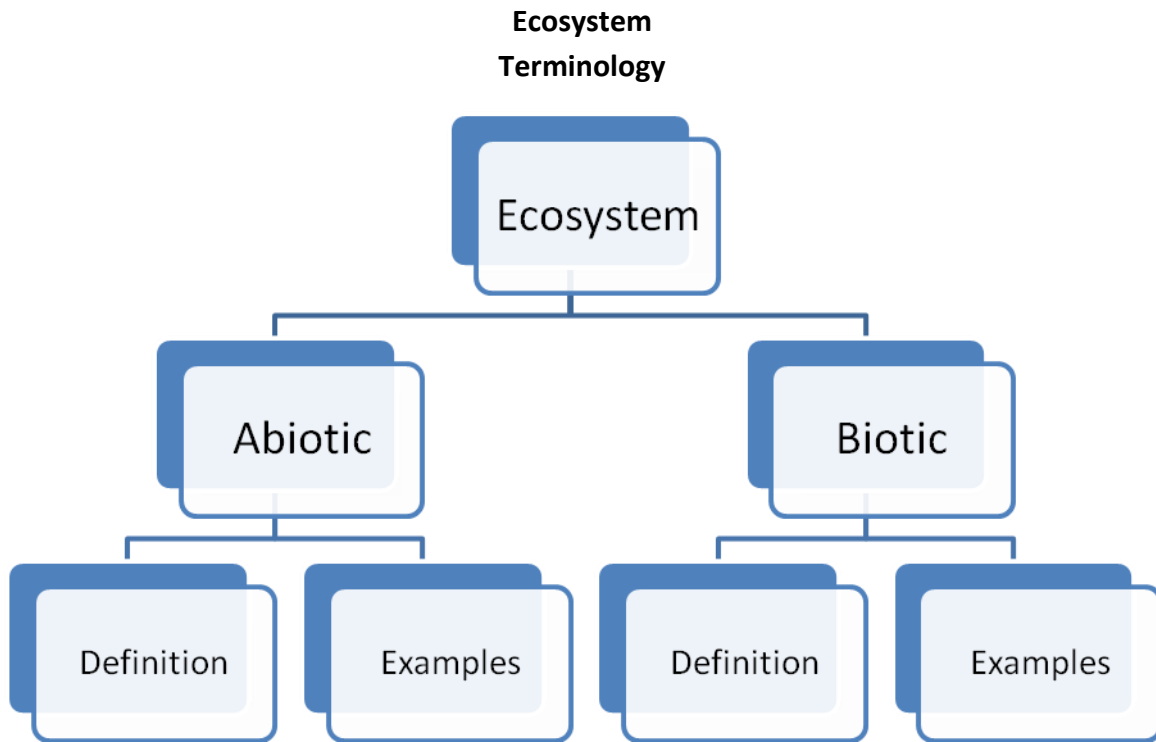
Examine the following terms and arrange them in order of decreasing size:

Community, biome, ecosystem, biosphere, population

Complete the diagram below using the five terms above



Level	Description	Example (if applicable)
Biosphere	All places on Earth where life exists	n/a
Biome	All ecosystems of a particular type	All deserts, all rainforests
Ecosystem	All living and nonliving things interacting in a given area	The creek behind Mephram, Mill Pond
Community	All living things in an ecosystem	All birds, insects, grasses etc. in Mill Pond
Population	All members of one species in a particular ecosystem	All blue jays in Mill Pond



Abiotic = nonliving such as rocks, water, sand

Biotic= living such as birds, insects, grasses

Habitat:

- What is it? **A place where an organism lives**
- Is a habitat abiotic, biotic or both? **Both**
- Provide two examples? **A worm living in soil and a squirrel living in a tree**
- How can more than one species occupy the same habitat?
The different species use their habitat in different ways

Niche: At Mepham, my niche is a science teacher and yours is a student.

- Based on the above statement, come up with a definition for **Niche**.

A niche is an organism's role in their habitat

- Provide the name of a biotic factor found in or around Mephram and identify its niche.
Squirrels eat acorns.
- What would happen if two species try to occupy the same niche?
The two species would compete
 - Interspecies =competition between members of two different species (squirrels and birds competing for bird seed)
 - Intraspecies = competition between members of the same species (seagulls fighting over a sandwich at the beach)

Why aren't there an infinite number of squirrels found in the Bellmore area?

Limited food, habitat, get hit by cars

- These items are known as limiting factors; based on this develop a definition for **limiting factor**
A limiting factor can be abiotic or biotic and controls a population.
- Identify the limiting factor in the following example: Some plants live well on a forest floor under tall trees, but do not do well in an open field due to increased light. Amount of light controls where the plants can grow.