

Factors Affecting Biodiversity and Populations

It is important in science to have a sense of scale.

I. Understanding Scales

A. Objects exist on a variety of

B. In science and Biology, we use many scales or

C. _____ can exist in the same location on a variety of scales.

II. Factors Affect Biodiversity and Population Dynamics

A. Interactions among plants, animals, and bacteria are important in the _____ and _____
_____ available to both _____ and _____ organisms in an ecosystem.

B. Physical (_____) and biological (_____) factors have a profound affect on ecosystems and the abundance (number) of species.

a. Abiotic Examples:

b. _____ : amount of food, decomposition and digestion by bacteria, disease or death by viruses and bacteria, oxygen production by algae

Microscopic organisms such as algae, fungi and bacteria are decomposers and break down dead organic matter

Microscopic particles such as viruses and bacteria can be harmful to an ecosystem causing disease or the death of organisms

Bacteria live on your skin and protect against other harmful bacteria. Digestion depends on a healthy microbiome.

C. Close Biotic Relationships in Ecosystems

Cannot have one without the other!

a. Symbiosis=

B. Three Types

1. Mutualism =

Ex: Plover bird removes food from crocodile's teeth

2. Commensalism=

Ex: Remora gets a free ride from shark and gets fed

3. Parasitism

= one organism (_____) benefits, while the other (_____) is harmed.

Ex: Tapeworm that lives in the intestines of man, pig, dog, cat, etc.

C. Predation =