

Introducing

ecology

Ecology

the study of the relationships between biotic and abiotic factors in environments

eco (G) root home, abode

log, -o, y (G) suffix study of

ecotourism

climatology

Ecosystem

includes all abiotic and biotic factors in one particular environment

Biotic Factors

the living parts of an ecosystem

Abiotic Factors

the nonliving parts of an ecosystem

Biotic Factors

include plants, animals, fungi,
microorganisms

bio(s), bio(t)

(G) root

life

biofeedback

Examples of Biotic Factors



Abiotic Factors

include air, water, soil, temperature, wind, source of energy (usually sun)

a, an (G) prefix not, without

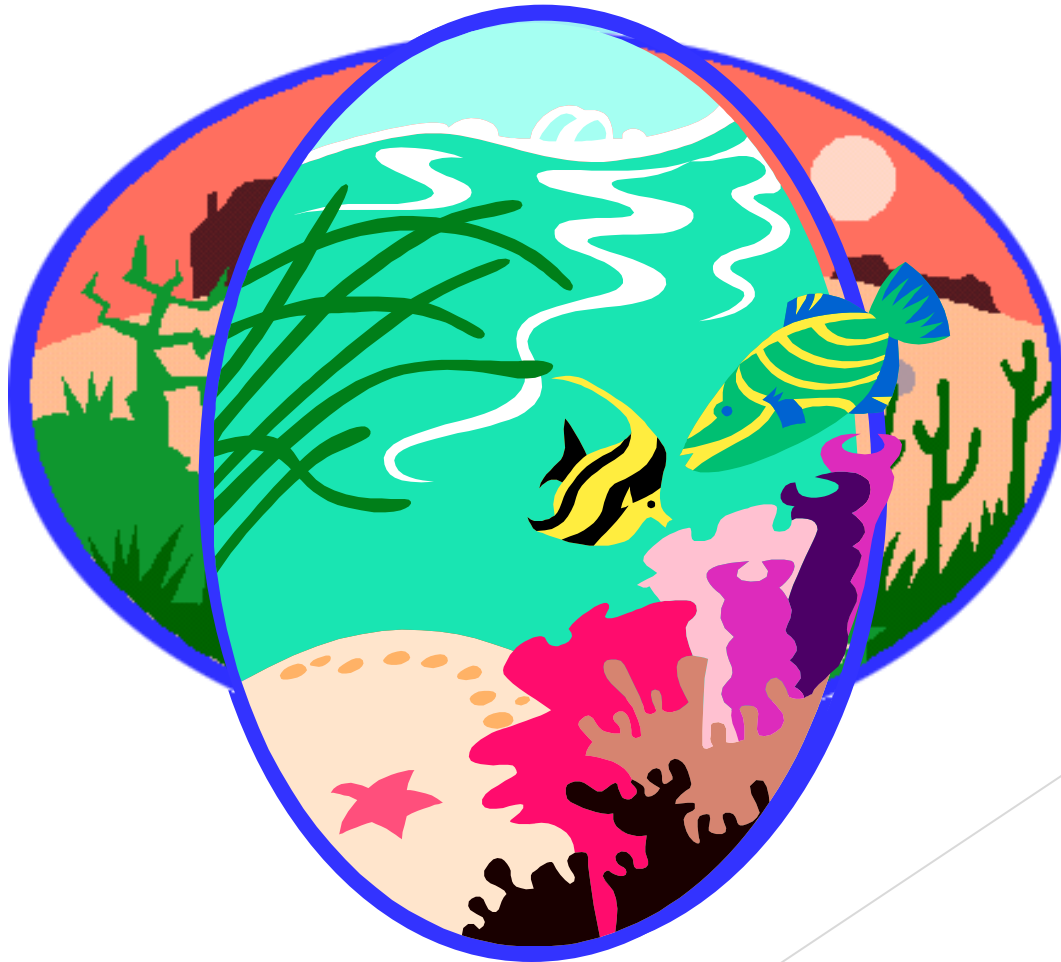
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Examples of Abiotic Factors



Examples of Ecosystems

Coral Reef in Belize



Ecosystems

do not necessarily have clear boundaries
due to **biotic** and **abiotic** changes

can change daily as things move from one
ecosystem to another

Biotic

migration, seed
dispersal

Abiotic

flood, erosion,
drought

Biotic Factors

interact with each other in complex ways

such as

parasitism
mutualism
competition

also interact with abiotic factors in the ecosystem

dependent upon water, minerals, temperature, light

Biomes

Biome

a major regional or global biotic community, a **super ecosystem**, defined chiefly by the dominant forms of plant life and the prevailing climate

Major Biomes of the World

desert

grassland

tropical rain forest

deciduous forest

coniferous forest

tundra

ocean

Levels of Organization

biome

ecosystem

community

population

organism

organ system

organ

tissue

cell

large region
with typical
plants and
animals that
includes
several
ecosystems

Video

- ▶ <http://www.youtube.com/watch?v=izRvPaAWgyw>
- ▶ <http://www.youtube.com/watch?v=hly0ZlyPPDg>

Questions

- 1) What is ecology?
- 2) What is the difference between biotic and abiotic factors? Give some examples of both
- 3) Give some examples of ecosystems. How often can they change and why?
- 4) Draw an illustration of the levels of organization from a cell all the way up to a biome.
- 5) How do biomes get their name, and what role do abiotic factors play in this?