

NOTES 11.1

Chapter 11 – Matter & Energy in the Environment
Lesson 1 – Abiotic Factors



What is an Ecosystem?

Have you ever watched a bee fly from flower to flower?
Flowers and bees depend on each other. Bees help flowering plants reproduce and flowers provide nectar for bees to make honey.

In an **ecosystem**, all organisms need both living and nonliving things to survive.

Q: What is an ecosystem?

A: all the living and nonliving things in a given area

Ecosystems vary in size and can be everything from a forest to a pond, a desert, an ocean and your

neighborhood; however, they must include **biotic** and **abiotic** factors.

Q: What is a biotic factor?

A: the living things in an ecosystem

Q: What are the abiotic factors?

A: the nonliving things in an ecosystem

BIOTIC FACTORS



BACTERIA



FUNGI



PLANTS



ARCHAEA



ANIMALS



PROTISTS

ABIOTIC FACTORS



AIR



SALINITY



SOIL



TEMPERATURE



LIGHT



WATER



MINERALS



pH



HUMIDITY

What are the nonliving parts of an ecosystem?

6 Nonliving factors -

1. sun

- source of all energy on Earth
- provides warmth & light
- needed by plants for photosynthesis



2. Climate - describes average weather conditions in an area over time

- includes temperate, moisture, and wind
- influences where organisms live



Examples - desert with a dry environment vs. Amazon rainforest

3. Temperature

- varies greatly all over Earth
- influences where organisms can survive



4. Water

- all life requires it
- organism are made mostly of it
- needed for life processes - growing & reproducing



5. Atmosphere - layer of gases that surrounds Earth

- mostly nitrogen & oxygen
- provides living things with oxygen
- protects living things from certain harmful rays from the Sun



6. Soil - bits of rocks, water, air, minerals & remains of once living things

- provides water & nutrients for plants
- home for many organisms - insects, bacteria and fungi

