

# Biology Notes: Ecology

Directions: Fill in as we cover the topic in the PowerPoint. Corresponds to pages 396 – 397, 402 – 404, 458

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## What is Ecology?

- **Defined:** Studying how \_\_\_\_\_ on Earth.
- **Point of this unit?** Show the \_\_\_\_\_ that \_\_\_\_\_ has on the \_\_\_\_\_ ... & vice versa

## What are the levels of Ecology?



## Populations

- Defined: \_\_\_\_\_ of \_\_\_\_\_ species living in the \_\_\_\_\_ area
- Population \_\_\_\_\_ based on:
  - Births, \_\_\_\_\_, Immigration, \_\_\_\_\_, \_\_\_\_\_ factors
- List some examples of populations within species:
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

## Population Patterns

- Populations go through 3 stages:
  - 1) \_\_\_\_\_ growth
    - Population is \_\_\_\_\_ adapting to particular environment
  - 2) \_\_\_\_\_ growth
    - \_\_\_\_\_ birth rates due to \_\_\_\_\_ selection & \_\_\_\_\_
  - 3) \_\_\_\_\_ capacity
    - **Defined:** \_\_\_\_\_ number of \_\_\_\_\_ that the environment can \_\_\_\_\_
    - Birth & death rates eventually \_\_\_\_\_
- What stage is the human population in? \_\_\_\_\_

### After Carrying Capacity?

- Some populations \_\_\_\_\_ for the long term
- Some populations experience a sharp \_\_\_\_\_ called a “\_\_\_\_\_”.

### Communities

- **Defined:** Many \_\_\_\_\_ living in the \_\_\_\_\_ area
- Each organism has its own \_\_\_\_\_
  - Habitat: \_\_\_\_\_ where an organism \_\_\_\_\_
- Each species has its own \_\_\_\_\_
  - Niche: The \_\_\_\_\_ of a species
  - Ex: Termites return nutrients to the soil

### Ecosystems

- **Defined:** All the \_\_\_\_\_ & \_\_\_\_\_-living things/factors in a given area.
- Biotic ( \_\_\_\_\_ ) Factors:
  - Animals: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- Abiotic ( \_\_\_\_\_ ) Factors:
  - \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, etc...
- What have we learned?
  - 1) The \_\_\_\_\_ affects the \_\_\_\_\_
  - 2) The \_\_\_\_\_ affects the \_\_\_\_\_

### Keystone Species

- **Defined:** one \_\_\_\_\_ that has a \_\_\_\_\_ impact on the entire \_\_\_\_\_
- Ecosystems often contain a “keystone species.”
- Ex: \_\_\_\_\_

### Biomes

- **Defined:** Large area with distinct \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ life
- List some examples of biomes:
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
- Climate Factors: Temperature, \_\_\_\_\_, Humidity
- Learned? Climate \_\_\_\_\_ where \_\_\_\_\_ can \_\_\_\_\_

### The biosphere

- **Defined:** \_\_\_\_\_ organisms and the part of the \_\_\_\_\_ where \_\_\_\_\_ exists
- Biosphere \_\_\_\_\_ can \_\_\_\_\_ life
- Ex: More \_\_\_\_\_ in the atmosphere... causes \_\_\_\_\_ temps

**Section Quiz**

1. What is ecology?

\_\_\_\_\_

2. What are two reasons that populations will increase? \_\_\_\_\_ , \_\_\_\_\_

3. What are two reasons that populations will decrease? \_\_\_\_\_ , \_\_\_\_\_

4. What are factors that control population growth called? \_\_\_\_\_

5. How does a population, community, ecosystem, biome, and biosphere differ? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. What is the difference between a habitat and a niche?

\_\_\_\_\_

\_\_\_\_\_

7. What is a keystone species?

\_\_\_\_\_

8. Give 4 examples of abiotic factors:

\_\_\_\_\_

9. What determines a biome's climate?

\_\_\_\_\_

10. Place the levels of ecology in order from smallest to largest: Ecosystem, Population, Biosphere, Community, Biome

\_\_\_\_\_ > \_\_\_\_\_ > \_\_\_\_\_ > \_\_\_\_\_ > \_\_\_\_\_