Biology Notes: Ecology

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

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
    ______________________ > ______________________ > ______________________ > ______________________ > ______________________