

Ecology Basics - Lesson 1 Notes

Name _____

Directions: Watch the INTRO TO ECOLOGY video on EDPuzzle to help you complete these notes.

1. Ecology is the study of the relations of _____ to one another and to their physical _____.

2. The survival of species is dependent on other living organisms and nonliving components, which is known as _____. Humans need plants to produce _____ and plants need the _____ we produce.

3. An _____ is a scientist who studies ecosystems.

4. The _____ includes all the living things on earth.

5. An _____ includes all the organisms and nonliving environment found in a particular place.

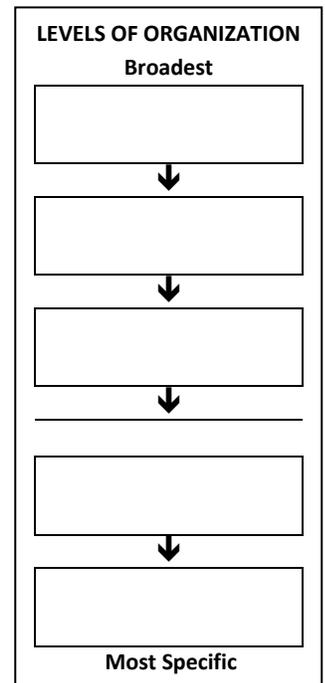
6. The _____ includes only the living things in an area, while a _____ refers to all the members of one species in the area.

7. List the levels of organization from broadest to the most specific in the chart. →

8. The place where an organism lives is called its _____. The living parts are called _____ factors, while the nonliving parts are called _____ factors.

9. The job or role of an organism within its environment is called its _____.

10. What is the difference between a generalist and a specialist species? Give an example of each.



Ecology Basics: Lesson 2 Notes - Watch the SERIOUS SCIENCE: BIOLOGICAL CARRYING CAPACITY video on EDPuzzle to complete this page.

- 1) An _____ can only support a limited number of species before problems can begin happening.
- 2) Biological carrying capacity is the capacity of an ecosystem to _____ or support a healthy number of certain _____.
- 3) The three variables used to determine the carrying capacity are _____ of foods, _____ foods, and _____ for food.
- 4) What are the two main food sources for lake sturgeon? _____ & _____
- 5) Why are lake flies not considered a sustainable food source? _____

- 6) Explain how too many walleye in the lake could affect the sturgeon population. _____

- 7) How do biologist regulate the populations in an ecosystem? Give an example. _____

- 8) What are three factors that might affect the school garden's carrying capacity for Monarch butterflies?
 1. _____
 2. _____
 3. _____

Ecology Basics: Lesson 3 Notes - Watch the POPULATION ECOLOGY video on EDPuzzle to complete this page.

1. Identify each type of “ecology”.

- _____ Ecology – Study of groups within one species and how they live together in one geographic area
- _____ Ecology – Study of groups of different organisms (different species) living together and how they influence each other.
- _____ Ecology – Study of how all living and non-living things interact within an entire ecosystem.

2. A _____ is a group of individuals of one species who interact regularly, which depends on how close or far away they are from each other.

3. The _____ of the population depends on the number of mosquitoes in a specific area. It might increase due to births and _____ (individuals moving in) or decrease due to deaths or _____ (individuals moving out.)

4. The _____ of mosquitoes depends on where individuals are located geographically in relation to others, such as all in one area or spread through the county.

5. The term _____ refers to the number of offspring that are produced in an animal’s lifetime, such as _____ (in 40 years) for black rhinos compared to _____ (in 2 weeks) for a mosquito.

6. _____ factors determine a population’s ability to grow, such as temperature, habitat needs, food, reproduction, etc.

7. What do female mosquitoes need to reproduce? Blood from a _____, _____ temperatures, a mate, and space with _____ water.

8. The _____ capacity is the number of individuals a habitat can sustain based on the resources it has available.

9. What is the difference between density-independent and density-dependent?

DENSITY- _____ - Depends on the number of animals in an area (more mosquitoes = more bats)

DENSITY- _____ - Does not depend on how many animals are in an area (storm washing away stagnant water or colder temperatures that would slow reproduction).

10. Exponential _____ means that a population will grow exponentially up to a point in which it can’t be sustained.

11. Based on the January → June graph, the carrying capacity for mosquitoes in this habitat is _____.

12. What was the rate of growth for the Dallas mosquito population? _____