Ecology Study Guide

List of Topics

* **Biotic** – a living component of a community

Examples: organisms, such as plants and animals

* **Abiotic** - nonliving factors that affect living organisms

Examples: habitat (pond, lake, ocean, desert, mountain) or weather such as temperature, cloud cover, rain, snow, hurricanes, etc.

* **Biodiversity** – many genes within a population/species; many different species in an area; many types of ecosystems
* **Limiting Factor** – a resource an organism or population *has to have* to survive (Ex. water, food)
* **Invasive Species** – a species that takes over an area by taking resources from other species
* **Food Web** – shows animals interacting with each other by eating and being eaten
* **Biomes** – know the 9 biomes (grassland, tundra, taiga, temperate deciduous forest, savanna,   
  tropical rainforest, desert, freshwater, marine) and the biotic and abiotic factors that make them different from one another
* **Human Impacts on Biodiversity** – human population growth, habitat degradation, pollution, overfishing
* **Carrying Capacity** – maximum population an environment can hold/support

Practice

Label as biotic or abiotic:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1. Temperature, latitude, longitude

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Trees, birds, bushes

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. Rain, altitude

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. Grass, bears, squirrels

5. A plant or animal that takes resources from another is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  
6. A variety of different types of plants and animals is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. Describe the 4 main ways humans have an impact on biodiversity.

8. What is biodiversity and why is it important?

9. In what ways do invasive species disrupt an ecosystem?

10. Put the levels in order from smallest to largest: community, ecosystem, biosphere, organism, & population.

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| --- | --- | --- | --- | --- |
| **smallest** |  | | | **largest** |
|  |  |  |  |  |

11.

|  |  |
| --- | --- |
| **Factor** | **Impact on biodiversity** |
| human population growth |  |
| habitat degradation |  |
| pollution |  |
| overfishing |  |

12. Give definitions of the following terms and examples of each:

producer/autotroph -

consumer/heterotroph -

herbivore -

carnivore -

omnivore -

13. What does the arrow point to in a food chain/web? (the one eating or the one being eaten?)

14. Briefly describe how the following **renewable resources** work & where they would work best in N.C.:

**wind energy** –

**solar energy** –

**hydroelectric energy** –

**biomass** –

**nuclear energy** –

15. What is the difference between a food chain and a food web?

16. Explain the effects of **“reduce, reuse, & recycle”** on resources & energy.