

# Environmental Science Study Guide

## Evolution and Ecology

### Vocabulary

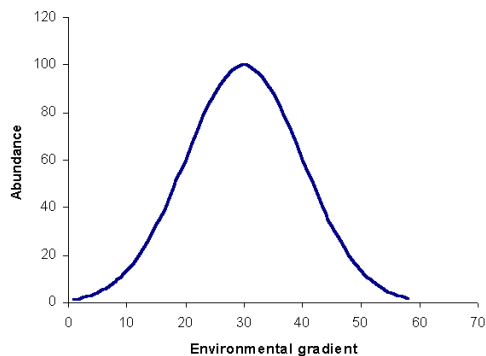
*Understand and be able to apply each of these terms.*

1. Ecology –
2. Organism -
3. Population -
4. Biological Community -
5. Ecosystem -
6. Biosphere -
7. Habitat -
8. Critical Factor -
9. Natural Selection -
10. Speciation -
11. Biodiversity -
12. Density-dependent resistance factor –
13. Density-independent resistance factor –
14. Symbiosis –

### Critical Thinking

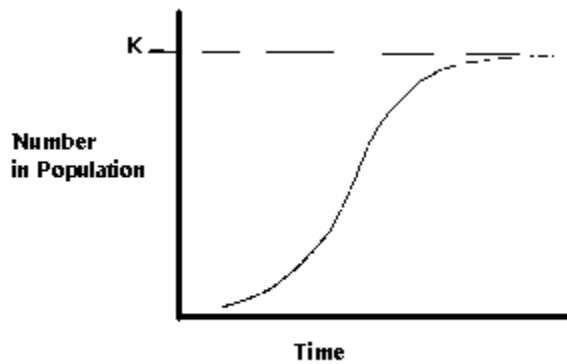
*Be able to read, analyze, and give complete answers to questions like these.*

1. Using a tolerance graph like the one below, identify the **optimal range**, **zone of physiologic stress (x2)**, and **zone of intolerance (x2)**

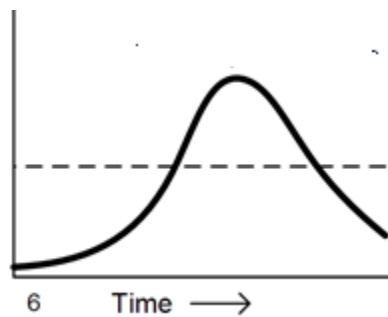


2. Give an example of each of the three types of adaptations:
  - a. Physical –
  - b. Behavioral –
  - c. Physiologic –
3. What is the difference between divergent and convergent speciation? Give an example of each.
4. There were four factors given that can favor certain individuals in a population. Explain each.
  - a. Physiologic Stress –
  - b. Predation –
  - c. Competition –
  - d. Sexual Selection -
5. How is artificial selection different than natural selection?
6. There are about 1.5 million species on Earth identified. The majority of known species are what?
7. Which two classification taxa are used to define a species' scientific name?
8. Why is having a scientific name for each species so important?

9. On the logistic growth below, identify the carrying capacity.



10. On the exponential growth curve below, identify the carrying capacity, overshoot, and dieback.



11. Describe and give an example of each of these types of relationships.

Relationship	Definition	Example
Predator-Prey		
Intraspecific Competition		
Interspecific Competition		
Mutualism		
Commensalism		
Parasitism		