

Name \_\_\_\_\_

Date \_\_\_\_\_

Period \_\_\_\_\_

## **Chapter 51 Animal Behavior**

1. What is behavior?

Define these terms:

2. learning-

3. maturation-

4. habituation-

5. imprinting-

6. classical conditioning-

7. operant conditioning-

8. play-

9. cognition-

10. kinesis-

11. taxis-

12. migration-

13. social behavior-

14. pheromones-

## **Ch 52 An Introduction to Ecology & the Biosphere**

**1. Define** ecology.

2. How are ecological and evolutionary time related?

3. What is the difference between a population and a community?

4. What factors make up an ecosystem?

---

5. The global ecosystem is called an\_\_\_\_\_
6. Why is Rachael Carson so important to ecology?
7. \_\_\_\_\_ is the study of past and present distribution of individual species.
8. Describe the problems of introduced species with an example.
9. \_\_\_\_\_ & \_\_\_\_\_ selection contribute to distribution of organisms.

Abiotic factors that affect distribution are:

11. What shapes the global climate?
12. Explain the significance of the great ocean conveyer belt.
13. What affect aquatic biomes most significantly?
14. How are pelagic and benthic zones different?
15. What is so unique about deep-sea hydrothermal vents?
16. Describe 1 terrestrial biome in terms of abiotic factors and typical animal species.

### **Chapter 53 Population Ecology**

1. A \_\_\_\_\_ is a group of individuals of a single species that occupy the same general area\_
2. What are the 3 patterns of dispersal and upon what are they based?
3. \_\_\_\_\_ is the study of factors that affect the growth & decline of populations
4. Sketch the three basic survivorship curves and what is their connection to 14's of offspring.
5. \_\_\_\_\_ is moving into an area while \_\_\_\_\_ is moving out.
6. Explain big bang reproduction.

7. Does "producing" a particularly large amount of offspring tend to enhance or reduce the life span of the parent?
8. Why do some species have many more offspring than others?
9. What is ZPG?
10. What is another name for geometric population growth?
11. The maximum size that a particular environment can support is called \_\_\_\_\_
12. What is the difference between k-selection & r-selection populations?
13. What is the difference between density dependent and density independent growth?
14. What do the cyclic fluctuating populations of the hare and lynx show?
15. The movement from high birth rate & high death rate to low birth rate & low death rate is called \_\_\_\_\_
16. According to the ecological foot print chart is the US at carrying capacity?

#### Ch 54 Community Ecology

1. What is a community?
2. List some interspecific competition?
3. How are the competitive exclusion principle and niche related?
4. What are some predator adaptations?
5. What are some prey adaptations?
6. How are food chains and food webs related?
7. Give an example of a predator, consumer, and decomposer for a food chain.
8. Which species in a community have the highest biomass?
9. \_\_\_\_\_ species exert control by their ecological niche?
10. How does primary succession differ from secondary succession?
11. Why do environments undergo succession?

12. What happens to species richness from the tropics to the poles?

#### Ch.55 Ecosystems

1. \_\_\_\_\_ must be constantly supplied to ecosystems( usually by the \_\_\_\_\_) while \_\_\_\_\_ must be recycled.
2. An example of decomposers would be?
3. Energy transfer is generally \_\_\_\_\_ & is ultimately lost \_\_\_\_\_
4. What is primary productivity?
5. Gross primary productivity minus respiration equals \_\_\_\_\_
6. Which ecosystem is most productive and why do you say so?
7. Limiting nutrients are \_\_\_\_\_ & examples could be \_\_\_\_\_
8. Why are upwellings important for phytoplankton growth?
9. The efficiency of energy transfer between trophic levels is less than \_\_\_\_\_. Why?
  
10. What is the connection between pyramids of production and biomass?
  
11. Why are there so few "top dog" consumers?
12. What are biogeochemical cycles?
13. Why isn't the water cycle the same as the others?
14. Why can't we use nitrogen from the atmosphere?
15. Why 2 processes play a pivotal role in the carbon cycle?
16. What is the source of potassium?
17. Why is a forest fire less damaging than logging to a forest?
18. How do humans disrupt nutrient cycling?
19. Magnification of toxins up a food chain is called \_\_\_\_\_

20. Has the amount of CO<sub>2</sub> in the atmosphere increased and its effect could be?

21. Why is the ozone layer important and what damages it?

### **Ch. 56 Conservation Biology & Restoration Ecology**

1. What is the "biodiversity crisis"?
2. What are the types or levels of biodiversity?
3. Interpret this quote " We must consider our planet to be on loan from our children, rather than being a gift from our ancestors"
4. What was Biosphere II and what did we learn from it?
5. Describe these threats to biodiversity:  
Habitat destruction-  
Introduced species-  
Over exploitation-  
Disruption of food chains-
6. What are edges?
7. Where would movement corridors be found?
8. What is a biodiversity "hot spot"?
9. In return for reduced international debt Costa Rica has set up \_\_\_\_\_
10. \_\_\_\_\_ uses prokaryotes to detoxify polluted ecosystems.
11. What is sustainable development & why is it important?