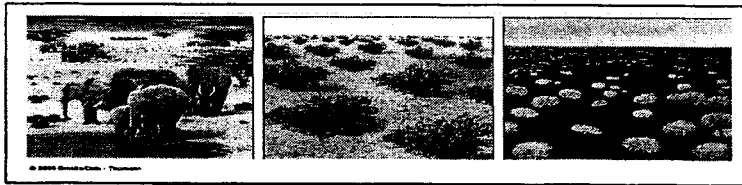


Chapter 8 Review Questions APES

1. Describe the various types of population distribution patterns that can occur in nature and comment on which is most common and why.

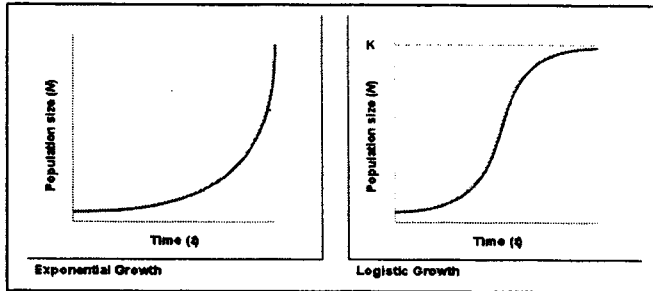


2. Define *birth rate*, *death rate*, *immigration*, and *emigration*. Write an equation to mathematically describe the relationship between these rates and the rate of population change.

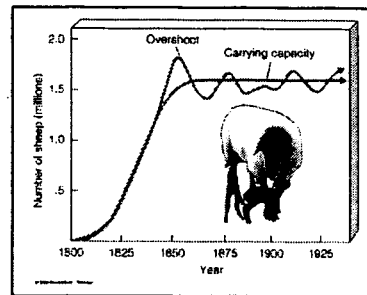
3. Define *limiting factor*. Give an example of a resource that would be limiting in an ecosystem.

4. Define *exponential growth*.

5. Compare a *J-shaped* growth curve with an *S-shaped* growth curve and comment on the factors that produce the sigmoid (S-shaped) curve.



6. Define *carrying capacity* and explain what determines the carrying capacity of an ecosystem.



7. Explain *density-dependent* population controls and *density-independent* population control.

8. List the four general types of population fluctuations in nature. Indicate which of these is most common.

r-Selected Species	K-Selected Species
Dandelion	Elephant
Many, small offspring	Fewer, larger offspring
Little or no parental care and protection of offspring	High parental care and attention of offspring
Early reproductive age	Late reproductive age
Most offspring die before reaching reproductive age	Most offspring survive to reproductive age
Small adults	Large adults
Adapted to unstable climate and environmental conditions	Adapted to stable climate and environmental conditions
High intrinsic growth rate (r)	Low intrinsic growth rate (r)
Population size fluctuates widely above and below carrying capacity (K)	Population size fairly stable and usually close to carrying capacity (K)
Generalist niche	Specialist niche
Low ability to compete	High ability to compete
Early successional species	Late successional species

9. Discuss the relationships between predators and prey and the possible interactions upon each other.

10. Define *r-selected* species and *K-selected* species and compare the two. Give an example for each type of species reproductive pattern.

11. Describe the three general types of survivorship curves in nature.

12. Explain the genetic effects on a population that has undergone *bottleneck*, *genetic drift*, or *inbreeding* due to isolation of the population.

