

Population Growth Lecture Notes

Population growth based on available resources

- Growth is a _____ of the environment
- Directly determined by the _____ available
- Two distinct types of population growth
 - _____
 - _____

Exponential growth

- Population has _____
- Occurs when the individuals in a population _____
- Lack of _____ (causes population growth to decrease)
- Shown as a _____ curve in a graph. Examples: bacteria!
- When a population has unlimited resources and continues to grow to its full living potential, it is called its _____.
- A population that has reached biotic potential has reached its maximum _____.

Logistic Growth

- Occurs when the population's growth _____ following a period of exponential growth; Most realistic and caused by resources becoming _____
- Influenced by _____ and can slow down when birthrate decreases or death rate increases. Represented as an _____

Carrying Capacity

- Represented as _____; _____ of individuals that a given environment can support

Limiting factors

- Is a factor that causes population growth to _____
- Two types of limiting factors:
 - _____
 - _____

Density-Dependent Factors

- Depends on _____
- Becomes limiting only when the _____ reaches a certain level
 - _____ is the number of organisms per unit area
- Best seen when population is _____
- Do not affect small, scattered populations. Examples:

Competition

- Occurs if crowded organisms compete for

Effect of Predation

- Population size often controlled by _____
- Takes place in the _____ relationship
 - _____ mechanism of population control

Parasitism and Disease

- _____ growth of population

Density-Independent Factors

- Affect all _____
- Examples: unusual weather, natural disasters, seasonal cycles, and human activities
- Can see a _____
 - _____ in the population size over time

Age Structure

- Population growth depends on how many people of _____ make up a given population.
- Populations with large numbers of young offspring have _____ for rapid growth

Patterns of Population Growth

- The scientific study of human populations is called _____
 - Examines the characteristics of human populations and attempts to explain how those populations will _____

Human Population Growth

- In the last 200 years, the human population has reached just over _____.

The Demographic Transition

- One hypothesis as to why these countries have slowed in their growth is the _____ (a dramatic change in birth and death rates).
- As countries modernize, there are advances in _____.

Review Questions:

1. How will a population change if there is abundant space and food and if the population is protected from predators or disease?
2. When does exponential growth occur?
3. When does logistic growth occur?

Word Bank:

Births

Emigration

Deaths

Immigration

4. When resources are abundant in a particular area, individuals may move into the population of this area. This movement of individuals into a population from a different population is called _____.
5. A very cold winter has left many deer in a population hungry and sick. By the end of the winter, this population will likely decrease because of _____.
6. A deer population experiences growth when the rate of reproduction increases. This change in population size is due to _____.
7. As humans move into their territory, many members of a deer population move away and join other herds. This movement of individuals out of a population into a new population is called _____.