

Chapter 16

Section 1

Mar 26 - 5:13 PM

Since 1930 the U.S. population has nearly tripled.

Populations - consists of all the individuals of a species that live together in one place at one time.

Mar 26 - 5:13 PM

Eventually limited resources can limit how much a population can grow.

What can limit a population?

climate
shelter
water
reproduction
food
disease
predators

Mar 26 - 5:14 PM

Three Key Features of Population

Population size - number of individuals in a population.

Very small populations are most likely to become extinct.

Mar 26 - 5:15 PM

Small Populations can all be destroyed by fire or flood. They also are more likely to interbreed

Interbreeding creates a genetically uniform population. i.e. more individuals could be homozygous recessive.

Mar 26 - 5:16 PM

- Population density the number of individuals in a given area.

Dispersion- the way the individuals of the population are arranged in space.

Mar 26 - 5:18 PM

Three Patterns of Dispersion



Mar 26 - 5:20 PM

Population Model- hypothetical
population that attempts to exhibit
the key characteristics of a real
population.

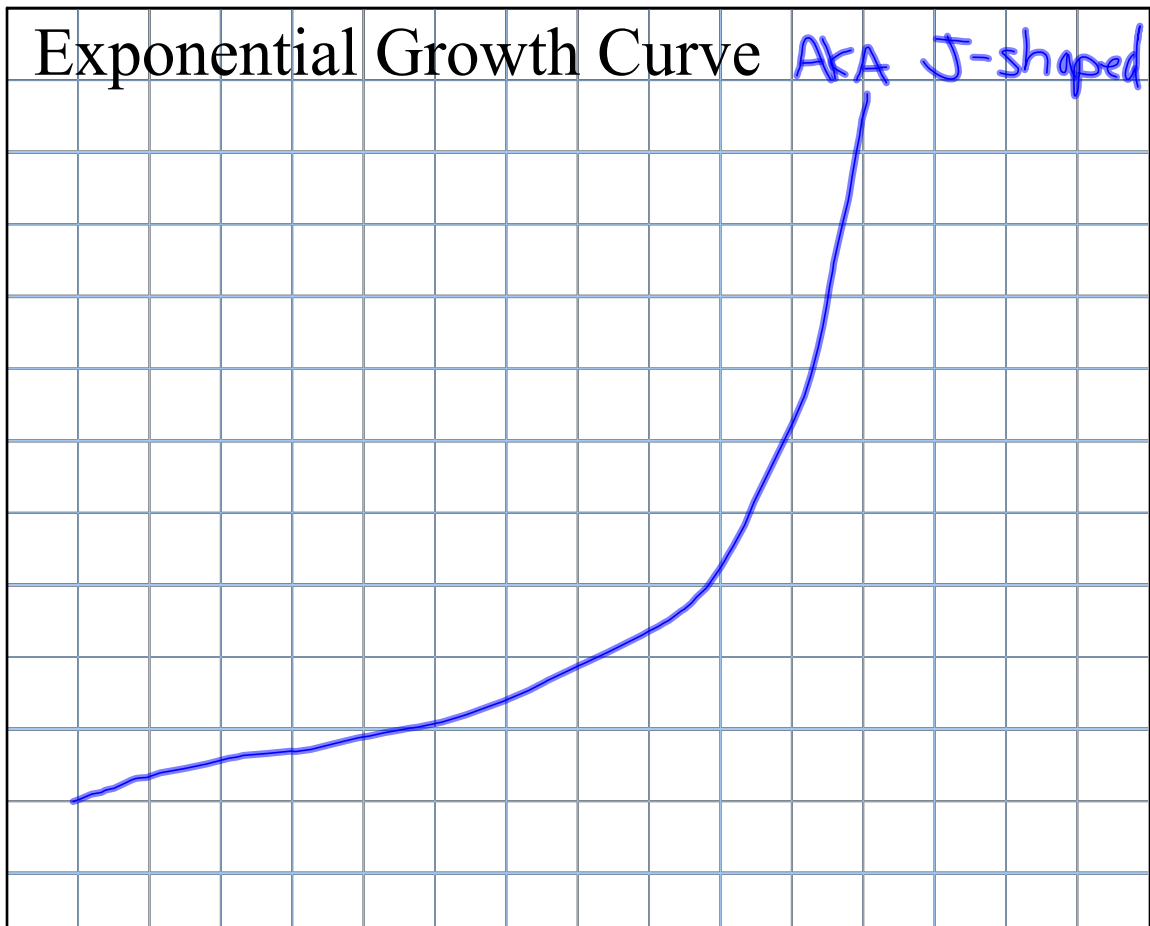
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Growth Rate

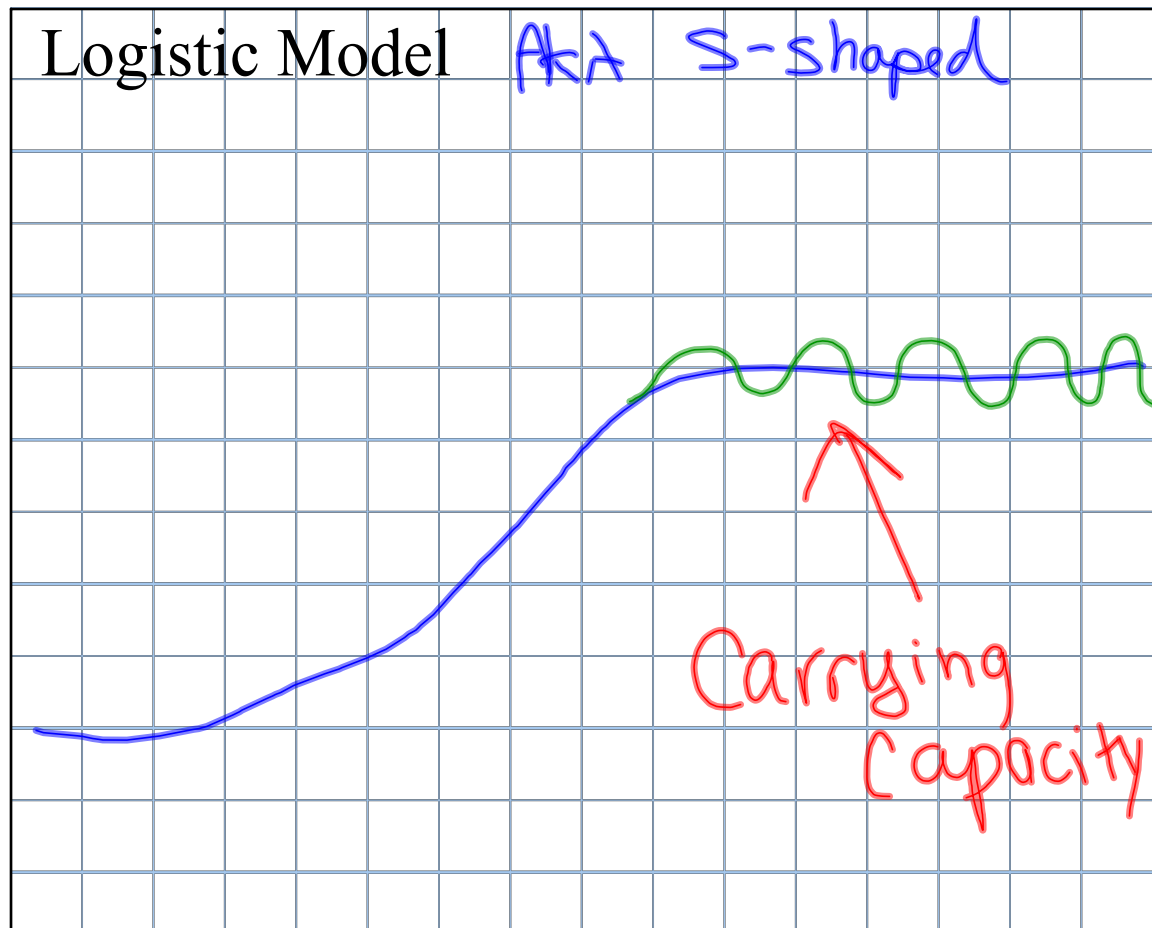
A population grows when more people are born than die.

Growth rate = birth rate minus death rate

Mar 26 - 5:24 PM



Grid - large



Grid - large

Carrying Capacity- the population size an environment can sustain.

Mar 26 - 5:27 PM

Density-dependant factors

food
water

Mar 26 - 5:28 PM

Density-independent factors

weather
climate -

Mar 26 - 5:28 PM

r-strategists

short lifespan

many offspring

small

mature quickly

hawk, fly

k-strategists

long life span

few offspring

large

mature slowly

human, elephant

Mar 26 - 5:30 PM