

## Chapter 16

### Section 1

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

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

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

What can limit a population?

births  
vs  
deaths  
disease habitat food  
sun climate water

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Three Key Features of Population

Population size - number of individuals in a population.

Very small populations are most likely to become extinct.

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

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

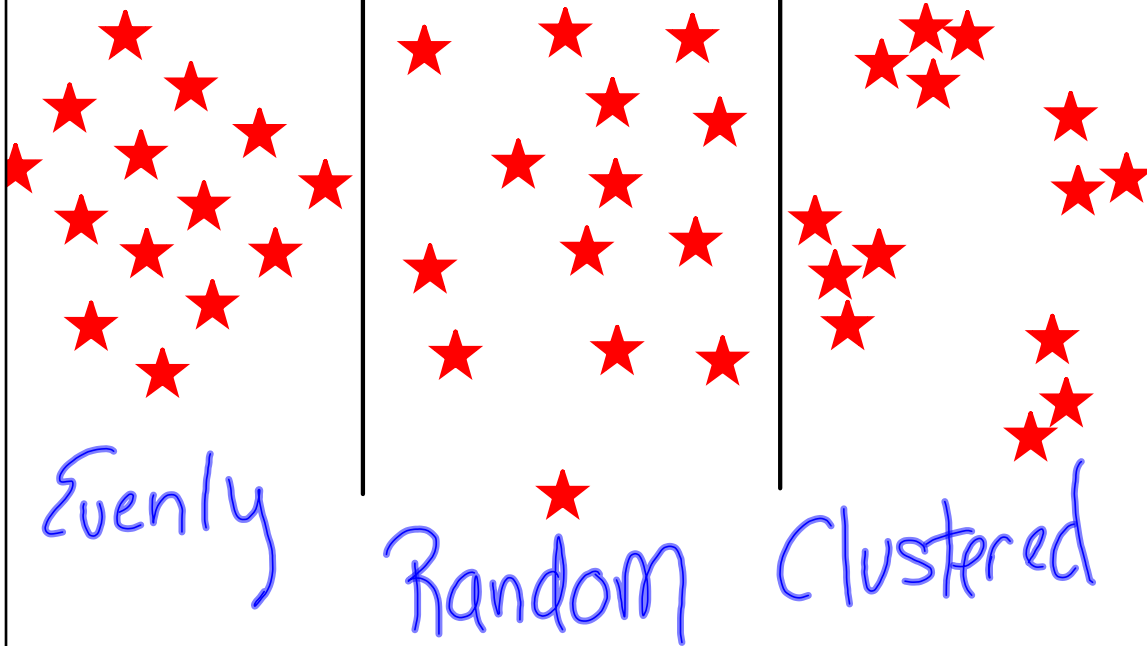
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- Population density the number of individuals in a given area.

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

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## Three Patterns of Dispersion



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

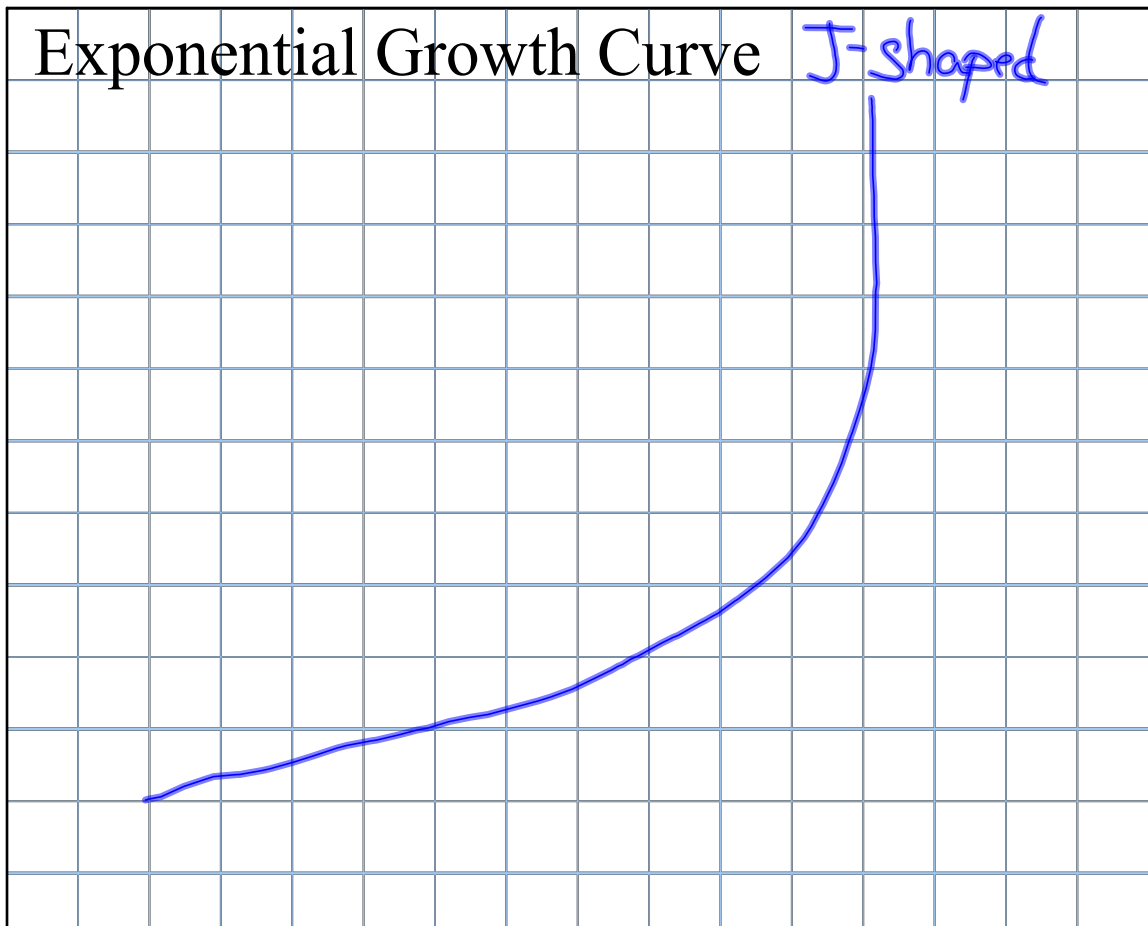
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## Growth Rate

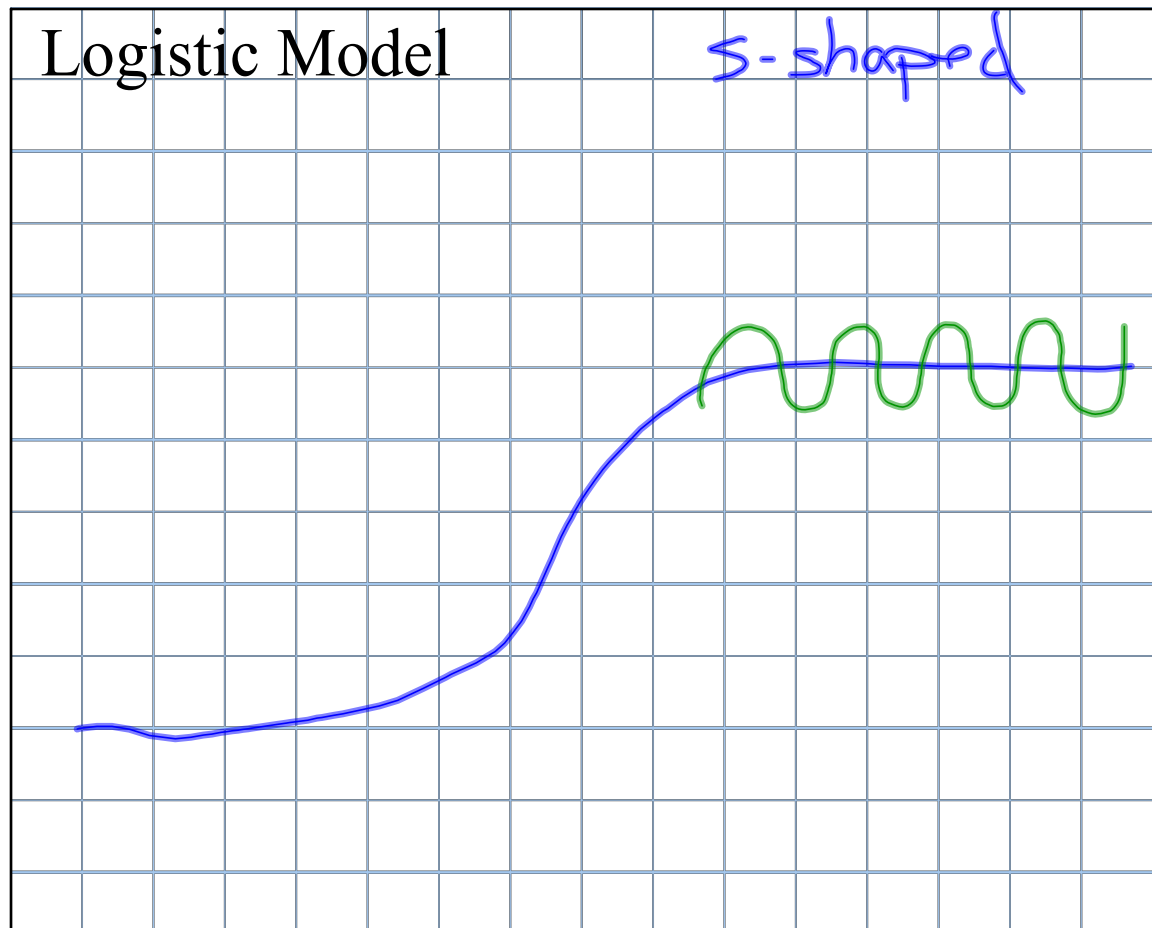
A population grows when more people are born than die.

Growth rate = birth rate minus death rate

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Grid - large



Grid - large

Carrying Capacity- the population size an environment can sustain.

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## Density-dependant factors

food  
water

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## Density-independent factors

weather  
climate

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## r-strategists

Short life span  
many offspring  
mature quickly  
Small

Fly

## k-strategists

Long life span  
few offspring  
mature slowly  
large

elephant

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