**Population Ecology Notes**

**Describing Populations**

**Three Main Factors**

1. **Geographic Range​:** Area inhabited by the population

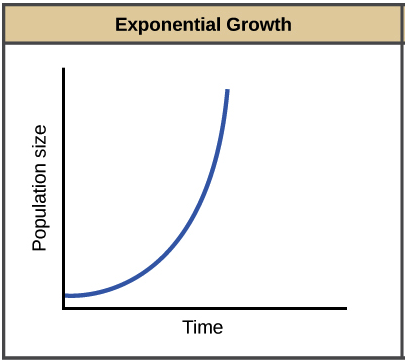
2. **Growth Rate​ / Density of Population**

Is the population increasing, decreasing or staying constant?

How many individuals in an area?

3. **Age Structure​**

* How many males / females
* Age distribution

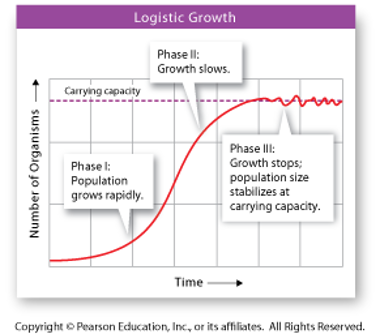
**Population Growth**

**Factors Effecting Growth**

1. **Birth / Death rates​**
2. **Immigration**: Individuals moving into a habitat​
3. **Emigration**: Individuals moving out of a habitat

***Exponential Growth***

**Almost any organism provided with ideal conditions for growth and reproduction will experience a rapid increase in its population (Example - Humans!)**

***Logistic Growth***

**Most organisms go through 3 growth phases**

**Phase 1 – population grows rapidly**

**Phase 2 – growth slows**

**Phase 3 – population size stabilizes**

***Carrying ​capacity* – the steady state of ​population size.**

**Limited by factors such as:**

* **Food availability**
* **Competition**

1. **Density Dependent Limiting Factors** (Occur when populations are large) ​

*Examples: Competition​, Predation​, Herbivory​, Parasitism and Disease​, Crowding and Stress*

1. **Density Independent Limiting Factors** (Can limit large or small populations) ​

*Examples: Weather​, Natural disasters​, Human activities, Seasonal cycles*