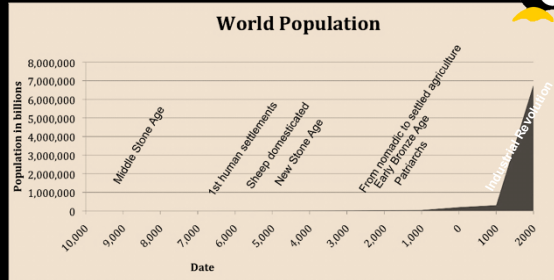


## Chapter 14 Interactions in Ecosystems

### Chapter 14.3 Populations Growth Patterns

The world's population slowly grew from 10,000 B.C. to under 500 million people by the 14<sup>th</sup> century.

Silly hoomin. Pengwins takes ova da world.



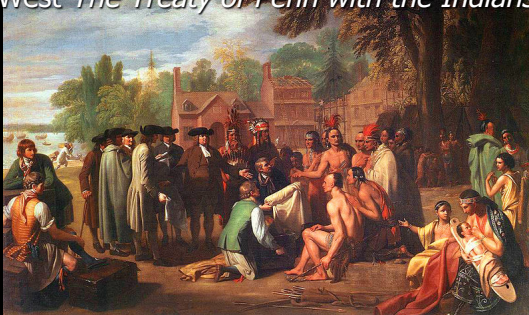
In 14<sup>th</sup> century one third of Europeans died from Bubonic plague or the Black Death. World-wide there was an estimated decrease in population from 450 to 350 million.

Pieter Bruegel's *The Triumph of Death* (c. 1562)

Toldya...

When the Puritans first settled the America's, 90% percent of Native Americans died from diseases they had no resistance to, such as small pox and malaria. Benjamin West *The Treaty of Penn with the Indians* (c. 1771)

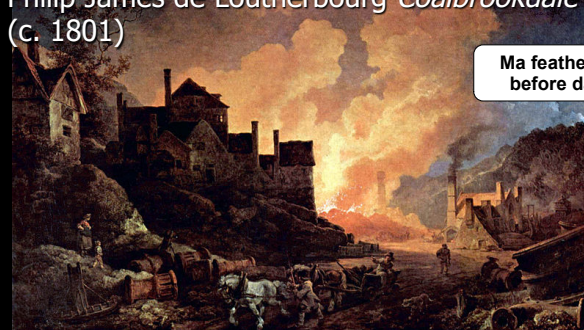
Hoomins has germz

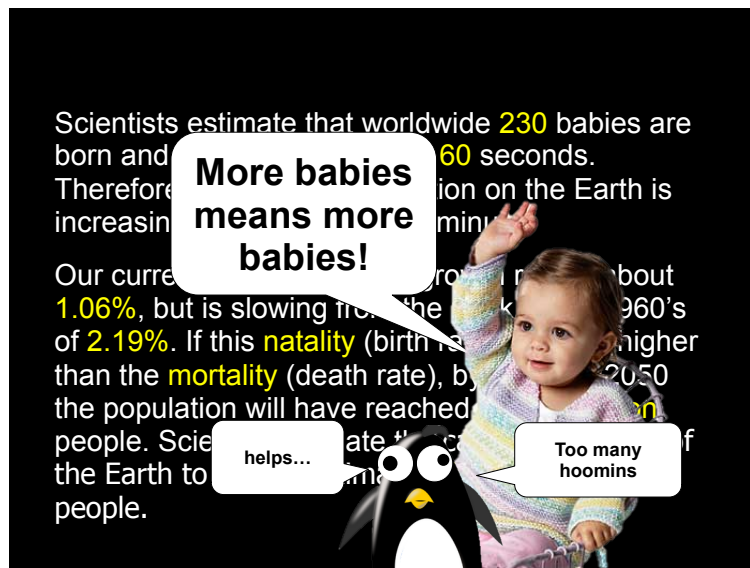


During the beginning of the Industrial Revolution (1750's) the world's population was about 750 million and began to climb reaching 1 billion by 1800.

Philip James de Loutherbourg *Coalbrookdale by Night* (c. 1801)

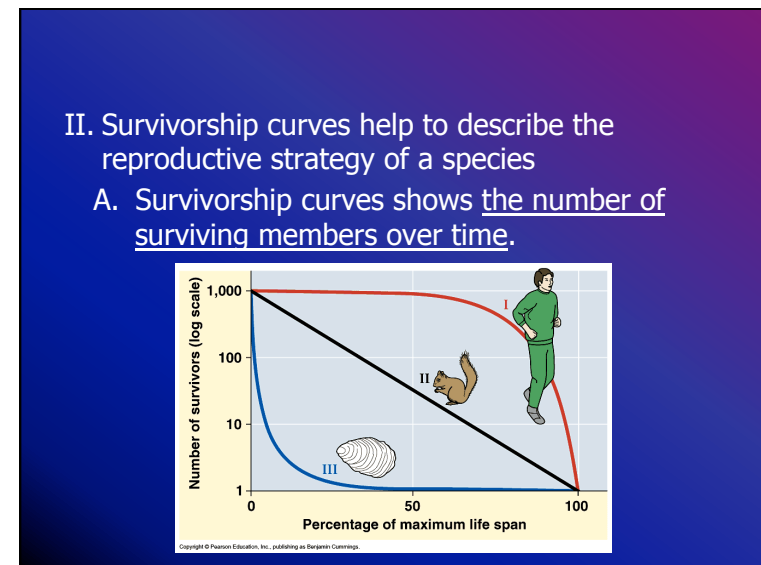
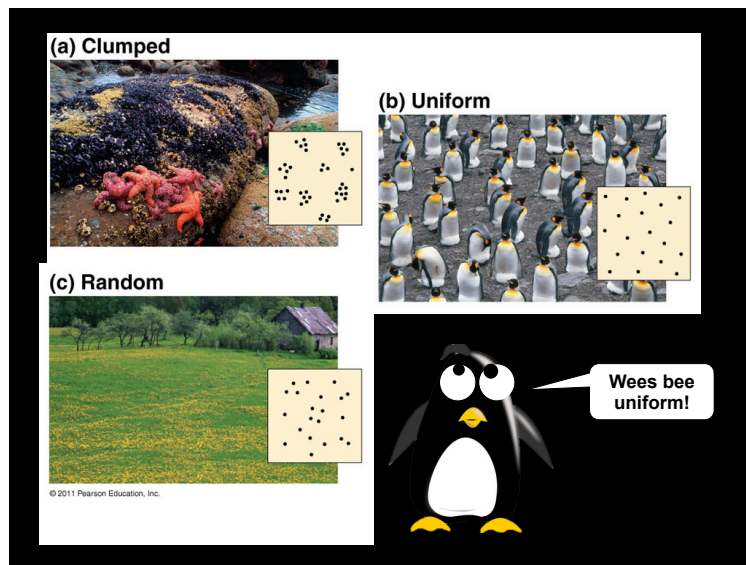
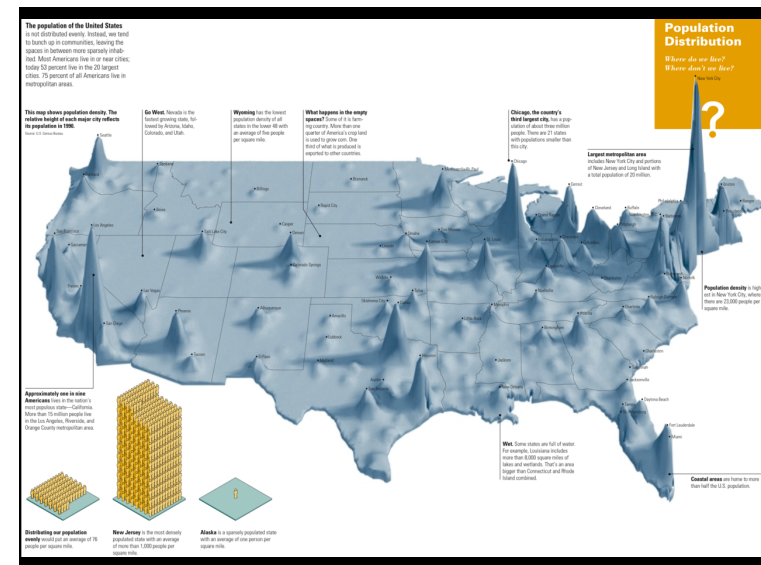
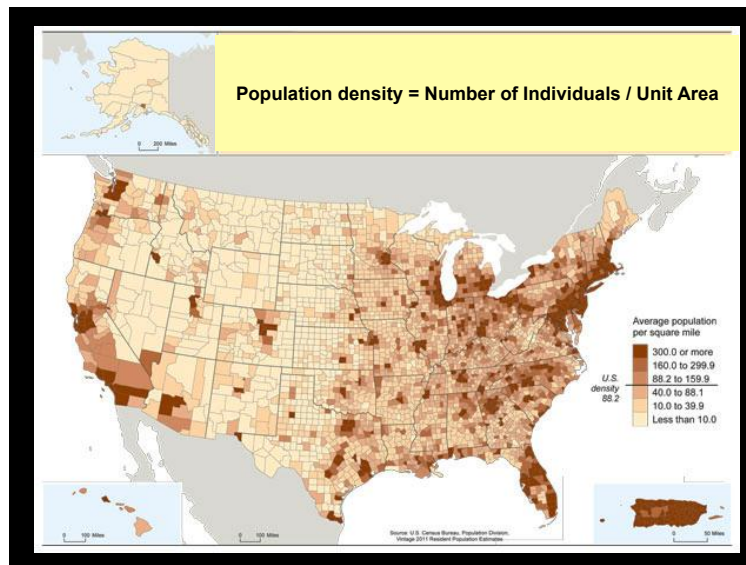
Ma feathers was white before da pollutionz





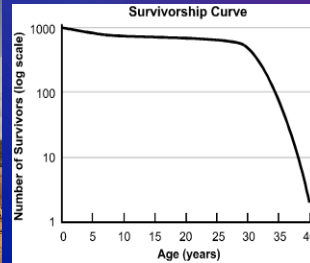
- I. Population density is the number of individuals that live in a defined area.
- A. The three characteristics of a population are:
  1. **Density** - the number of individuals per unit area
  2. **Population dispersion** - where a population lives
  3. **Growth rate** - the increase or decrease in the number of individuals in a population over time





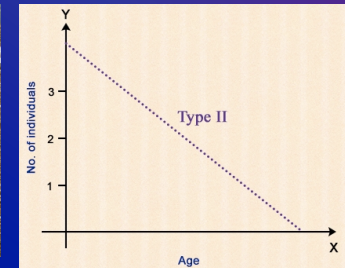
1. Type I – low birth rate, lots of offspring care, low mortality.

Ex: large mammals and humans



2. Type II – some offspring care, equal mortality at all ages.

Ex: birds, small mammals and reptiles



3. Type III – high birth rate, no/little offspring care, high mortality but a good chance of survival in adulthood.

Ex: fish, amphibian, plants

