



Wednesday, April 19, 2017

Pick up: self check

Today you will:

1. Complete self check on matter and energy flow through an ecosystem
2. Complete Population Activity/Assessment and work on questions & graph

Homework/Planner:

Complete Questions & graph-due Thursday

Self check Word bank-use once, more words than needed

- Chemoautotrophs
- Photosynthesis
- Cellular Respiration
- Ecosystem
- ~1%
- Herbivores
- Carnivores
- Decomposers
- Detritivores
- Omnivores
- Heterotrophs
- Autotrophs
- Oxygen
- Carbon dioxide
- Sun

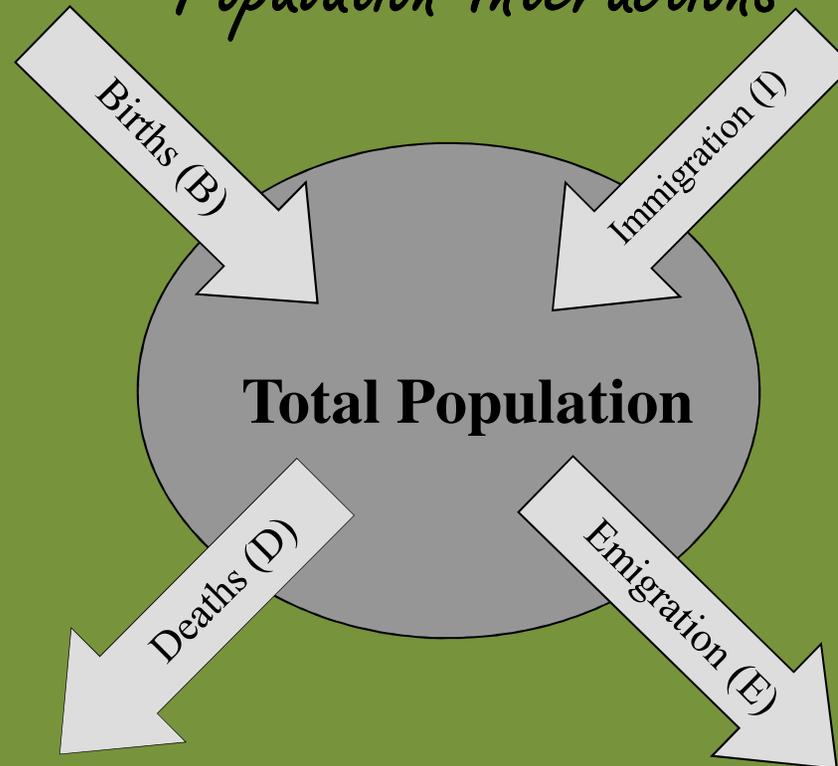
Indigo Snake



Copy on ISN p 211 top half

Interpret the Graphic

Population Interactions



1. What is the term used for populations moving into an area?
2. What is the term used for population leaving an area?
3. Name 2 factors that cause an increase in the pop. size?
4. Name 2 factors that cause a decrease in pop. size?

Does this matter to you???

“The earth's carrying capacity is under increasing stress from its sheer number of inhabitants. Nearly eighty million people are added to the world population every year, putting additional stresses on our planet. By 2025, the world population, at current rates, will elevate to 8.6 billion with the largest impact felt in the urban centers of developing countries. The combined pressures of population growth and massive poverty will weigh heavily on our stewardship potential.”

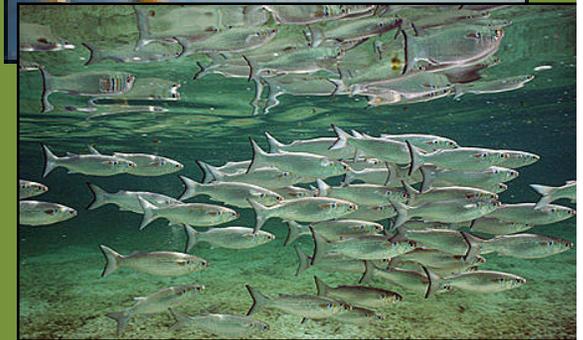


A Population is...

- Members of the same species living in the same area/*geographic region*)

#4 Pop Density = measurement of the # of ind. living in a defined space.

A. Things that can cause a change: weather, predators, prey, normal fluctuations, MAN!



#5 Factors that affect pop. size

1. Immigration = IN
2. Births
3. Emigration = EXIT
4. Deaths

#6 Graphing changes in pop size

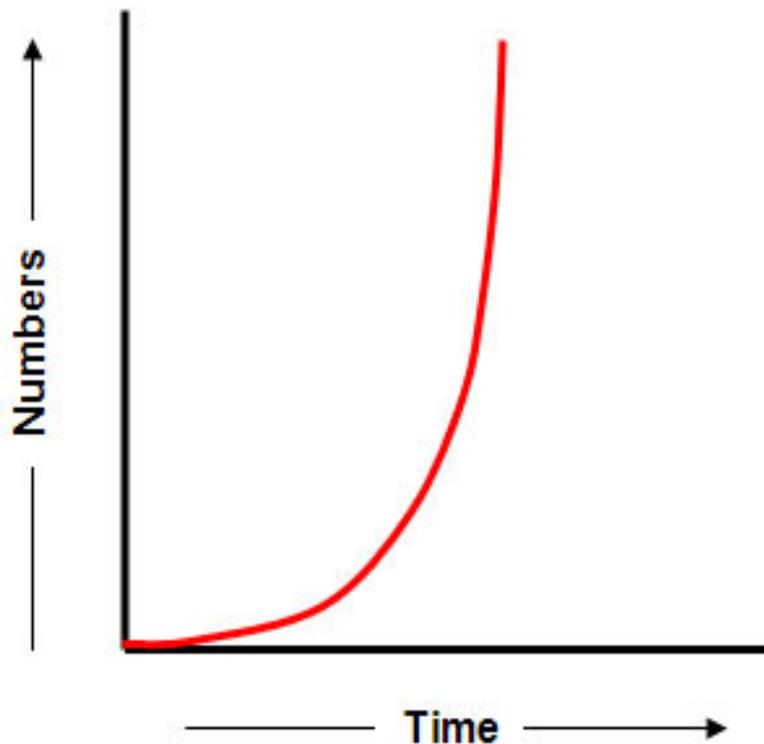
- A. Steady then dramatic increase =
Exponential curve
- B. Slow – exponential – leveling off (more realistic curve) =
Logistic curve

Ecologists Study What Happens to Populations; Two Common Modes of Population Growth

Exponential curve

(J-curve)

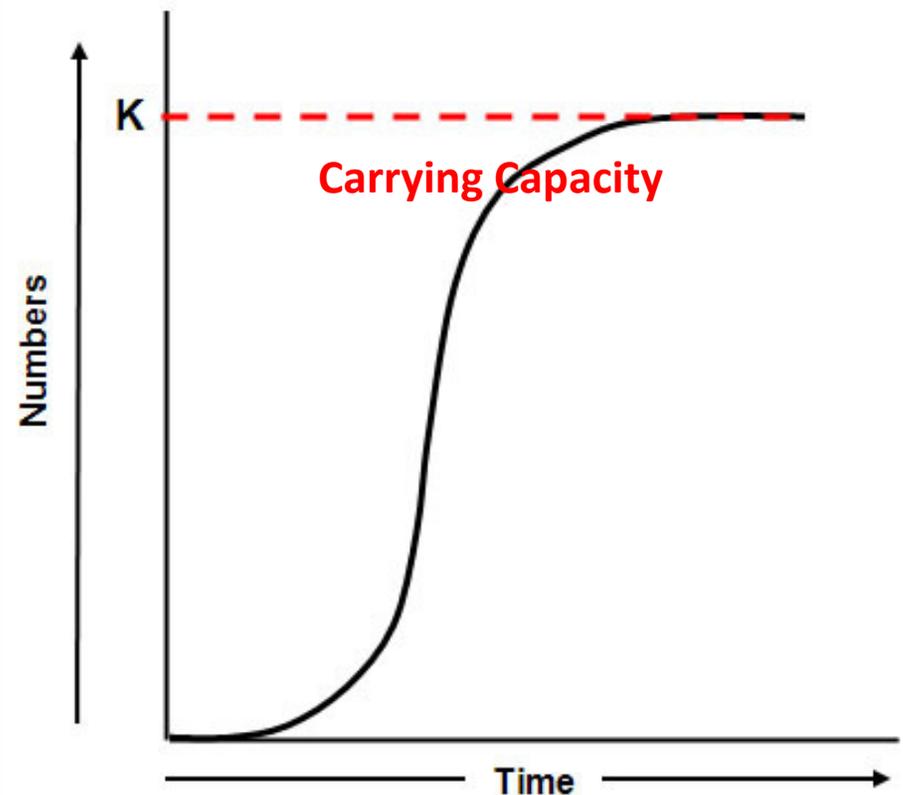
UNRESTRICTED growth



Logistic curve

(S-curve)

RESTRICTED growth



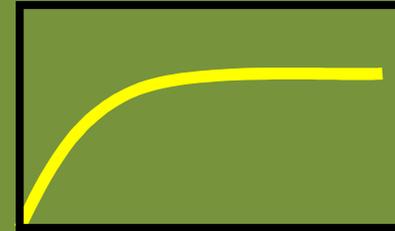
#7 Carrying Capacity is...

• *Total # of org. the environ. can normally & comfortably support*

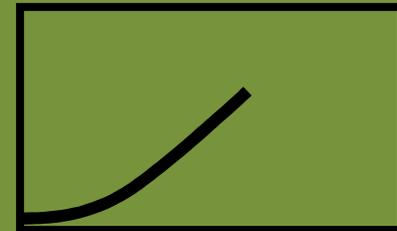
- 1. Example: A 20 gallon aquarium can support 20 fish**
- 2. Example: a Petrie dish can support 4 million bacteria cells**
- 3. Example: Old NSBHS built to support 800 students (hence the portables, crowded hallways AND this new school!)**
- 4. Example: The world can only support so many people....**

What happens to the growth rate when a population is....

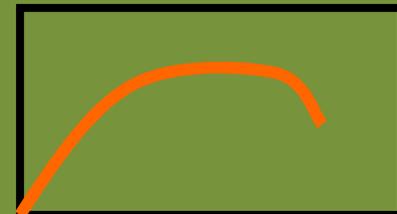
- **At carrying capacity =**

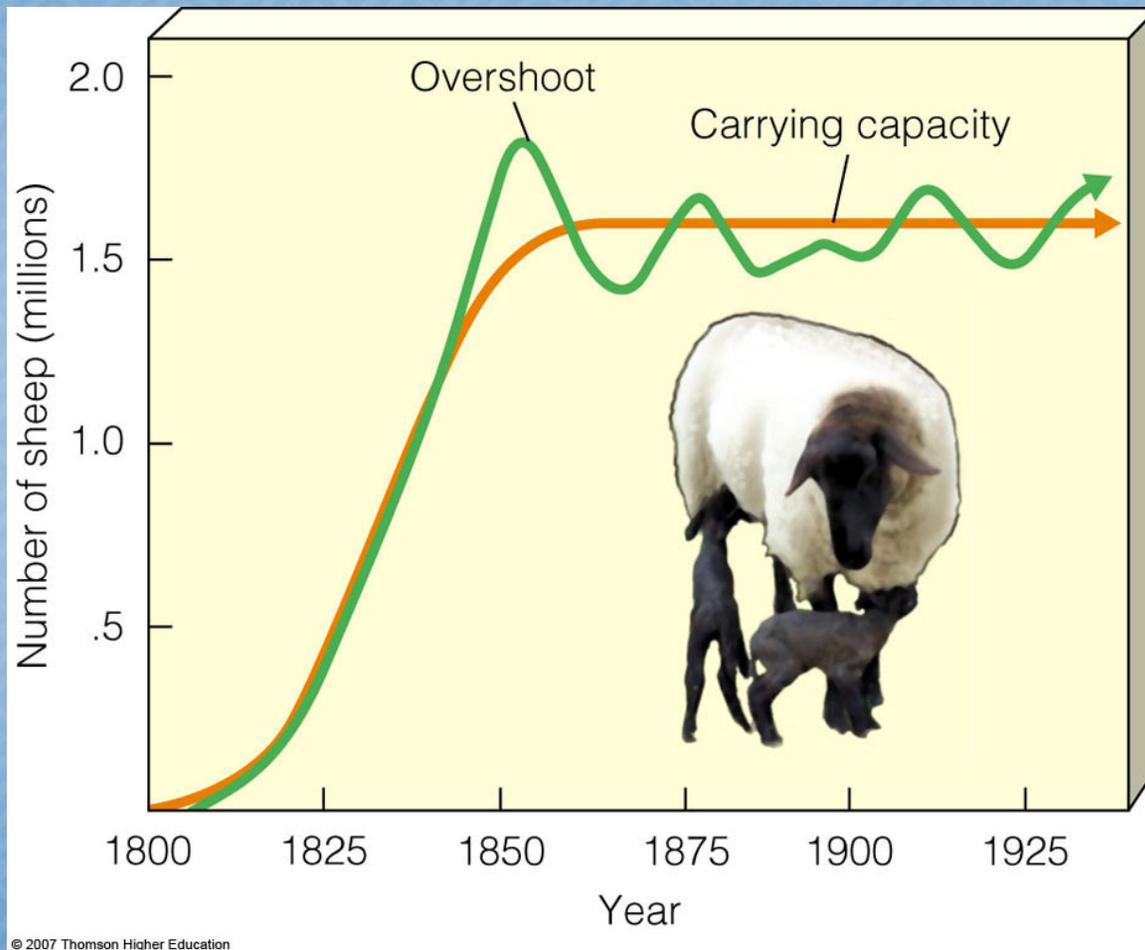


- **Below carrying capacity =**



- **Above carrying capacity =**





As a population levels off, it often fluctuates slightly above and below the carrying capacity.