

ENVIRONMENTAL UNIT

Page 1

9/9/11

Blue Bk pg. 186

- **We need water, food, sun, and shelter to survive**
- **ECOSYSTEM: living and nonliving things working together**

Page 2

LIVING (BIOTIC)

**(ABIOTIC)
NONLIVING**

Page 3

BIOTIC FACTORS: living things

**ABIOTIC FACTORS: non-living things
- and have NEVER been living**

ex:

- **water (used with sun and carbon dioxide for photosynthesis)**
- **sunlight**
- **oxygen**
- **temperature**
- **soil**

Page 4

LEVELS OF ECOLOGICAL ORGANIZATION

- **ORGANISM: a single living thing**
- **POPULATION: a group of the SAME organism**
- **COMMUNITY: a few populations blend together in an area**
- **ECOSYSTEM: a bunch of different communities living together as well as abiotic factors**

Page 5

- **Biome - a major category of ecosystem that contains similar climate (temp./precip.) as well as plants and animals**
- **Biosphere - the ecosystem of Earth**

Page 6

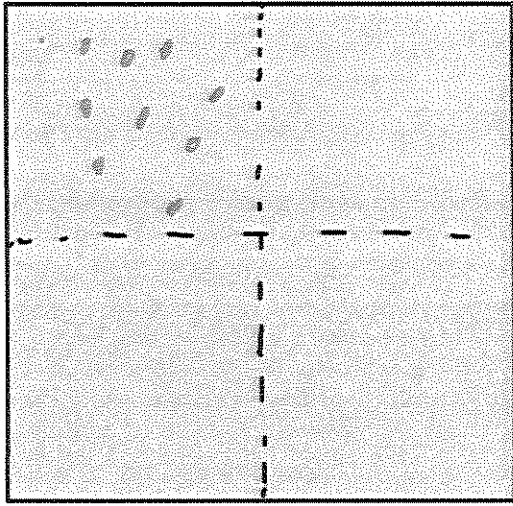
Population Density = the # of individuals in a specific area

Page 7

Ways to Find Population:

- 1. Direct Observation - look and count what you see**
- 2. Indirect Observation - using proof (nests, skin, etc.) to make an estimate of how many are there**
- 3. Sampling - count a small area and then multiply to find a larger estimate**
- 4. Mark and recapture - capture something, mark it, let it go, count again another time**

Page 8

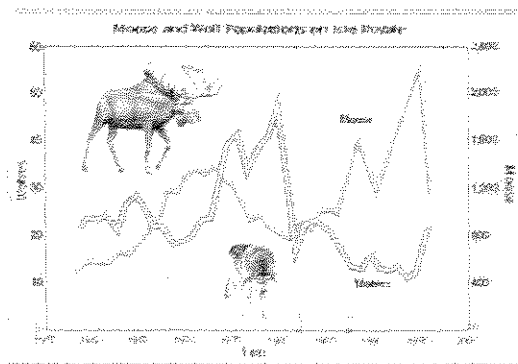


Pretend the dots are deer. How many would be in the whole plot of land? How did you come up with your answer?

Main way that members are added to a population is **BIRTH**

Main way that members leave a population is **DEATH**

If more things are born than die, the population will grow



Immigration - moving IN to a population

**Emigration - leaving a population
(EXITING)**



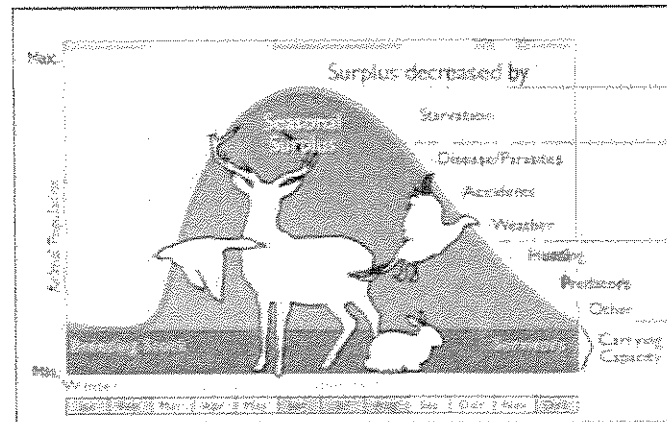
Page 11

LIMITING FACTOR - an environmental factor that stops a population from increasing

- 1. Food**
- 2. Space**
- 3. Weather Conditions**

Page 12

CARRYING CAPACITY: the largest number of organisms that the area can support without running out of resources



Page 13

Natural Selection - changes that organisms go through to make them better suited to their environment

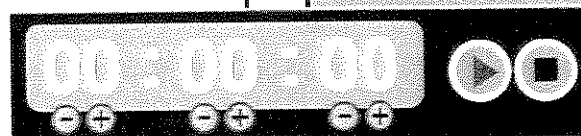
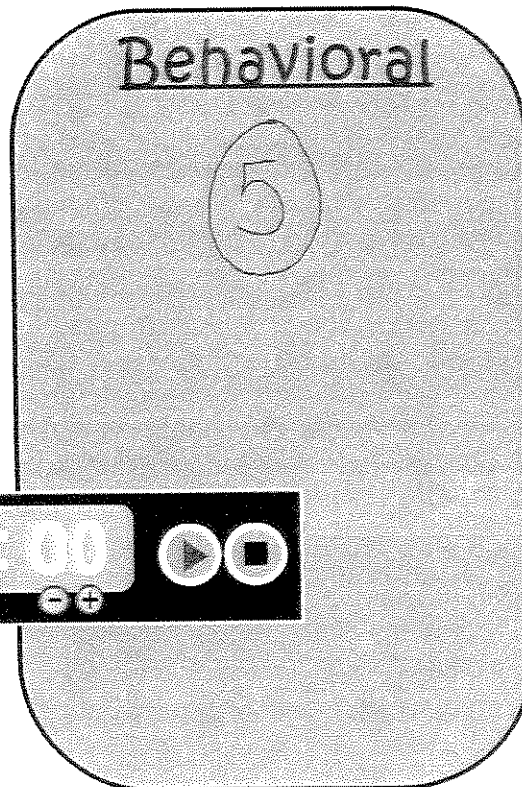
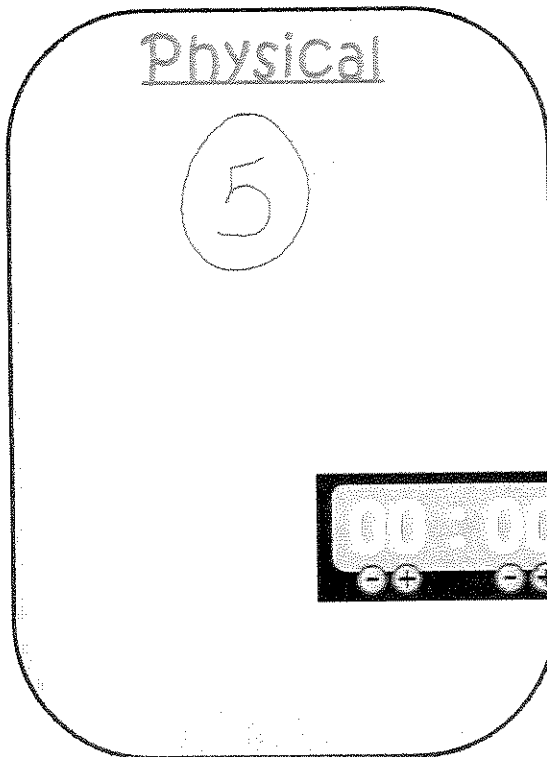
SURVIVAL OF THE FITTEST!

Page 14

ADAPTATIONS : behaviors or physical characteristics of a species that allows them to survive and live successfully in their environment

ex: camo, running quickly, strong beak, poison, sharp teeth, sharp claws, echolocation

The _____'s _____ allows it to _____ so
organisms it can _____.



NICHE - an organism's particular job or role in the ecosystem

- **type of food it eats**
- **how it gets its food**
- **how it fits in the food chain**
- **interactions w/ other org.**
- **how it reproduces**

Page 17

Different types of Interactions

1. Competition -

struggle between organisms to survive in an area with limited resources (food/water/shelter)

2. Predation -

= hunting

- **Predator =**

- **Prey =**

Page 18

3. Symbiosis (3 types) - The 3 "-isms"

- a. Mutualism
- b. Commensalism
- c. Parasitism

Page 19

3. SYMBIOSIS: a close relationship that benefits at least ONE of the organisms, if not both (3 types)

- a. Mutualism - both benefit
- b. Commensalism - 1 is helped, the other is not helped or harmed
- c. Parasitism - 1 thing lives on or in something else ~ 1 harmed, 1 helped

Page 20

Parasite -

Host -