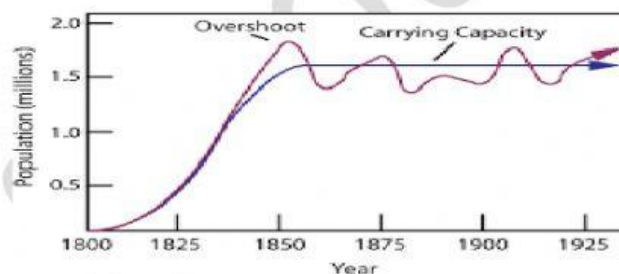




Carrying Capacity & Limiting Factors 101 video notes

1. Carrying capacity is the _____ of individuals of a particular species that a specific environment can _____.
2. Once a population reaches its _____ in an environment, a variety of factors work to _____ out that population.
3. Limiting factors control the _____.
4. The factors that control the growth of a population are _____.



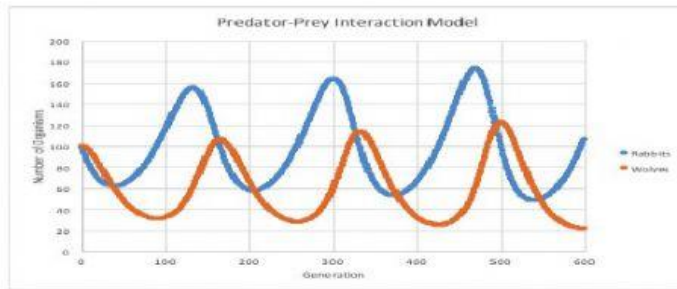
5. On this graph we are looking at the _____ or changes in a population over time and it's _____.
6. Take a look at the red line, from _____ the population continues to rise until it _____ around _____ and then it drops down to around _____.
7. The population continues to go _____ from year to year.
8. The blue line represents the average amount of _____ of a certain _____ that an ecosystem can _____ and keep alive with the amount of _____ that are available in that area.
9. The carrying capacity for this population of organisms would be approximately _____.

Learning Target: I can identify and explain the five factors that affect carrying capacity.

Limiting Factors of Populations of Organisms

1. **Competition** – When populations of organisms become _____, individuals in the population will _____ with each other for _____, and other essentials to keep them alive.
 - Some individuals acquire enough _____ to _____. Some individuals may get just enough resources for them to survive, but not enough for them to support and take care of _____.
 - Some organisms may not get enough _____ and they _____ or die from lack of essential resources.
 - Competition is a _____ limiting factor. The more individuals that live in a certain area, the _____ they use up the _____ in that area. Density-dependent limiting factors are any factor that effects the _____ of a population of living things in response to them being in _____ to each other.
 - What were people fighting over during the Covid-19 pandemic in 2020? _____
 - Many animals _____ for territories where they can _____ offspring. These areas are often located close to _____ to keep them alive.
 - Animals who do not find and establish a _____ often do not find _____ and therefore cannot breed and have _____.
 - When organisms from two different _____ compete for the same resource it creates a very important type of competition that is a major factor for _____.
 - Often times, one species _____, thrives, and keeps their population alive; while the other species dies and their population becomes _____.
2. **Predator-prey relationships** are very important in _____ especially when we talk about _____ Relationships.
 - Herbivores feed on _____ which provide the herbivores with _____. If there were too many herbivores then they would _____ the grass and other producers until there was nothing left.
 - The herbivore population would soon _____ and this would cause a _____ on every other organism in the ecosystem and cause their population to _____ and lead to possible _____.
 - Predators help control _____ populations by _____ them to get energy.
 - If predators weren't around to keep herbivore populations in _____, herbivore or primary consumer populations would grow out of control and _____ on plants and other primary producers which would _____ entire food webs and ecosystems.
 - Primary producers are the _____ of any food chain or food web, and without them everything else would _____.

Learning Target: I can identify and explain the five factors that affect carrying capacity.



- Why does the wolf population decrease as the rabbit population decreases? _____
 - Why does the wolf population increase as the rabbit population increases? _____
 - Predators and prey have a _____, as one _____ the other increases and vice versa.
 - Predation of herbivores or primary consumers is a very important _____ that helps sustain life on earth by preserving the amount of available _____ that many organisms depend upon for their survival.
3. **Parasitism and disease** – causing organisms _____ on their _____ which times weakens them, causes _____, and leads to death in some cases.
- Parasitism and disease are _____ factors because the _____ organisms are together the _____ parasites and disease can _____ from one host organism to the next.
 - Wolves are important for controlling and keeping _____ populations at a certain level.
 - What would happen if disease spread in wolf populations? _____
 - If the prey feed on grass and the wolves are no longer around, the prey population would _____ out of control and would _____ and other producer populations which would cause other grass eating organisms to _____ and die out.
4. **Unusual weather and natural disasters** - _____
- Both are _____ limiting factors.
 - Density- _____ limiting factors can have an impact on species of organisms no matter how _____ their population is in one area.
 - These limiting factor events can impact _____ areas and have _____ effects on several species in an area.
 - A heavy rainstorm can _____ away vital _____ and shelter that organisms depend upon to survive.
 - Extreme _____ can kill large numbers of _____ in a river or stream due to the lack of _____ Supplies.

Learning Target: I can identify and explain the five factors that affect carrying capacity.

5. **Invasive species** – can be huge _____ for organisms that are _____ to a certain environment.
- _____ Are organisms that have been introduced into a _____ and often _____ the _____, environment, and _____ the population of _____ species.
 - Some examples of invasive species are _____ and water hyacinths.
 - Invasive species _____ the native species of an area for _____ that they need to survive.