

Why It Matters

- The first rule of species survival in an ecosystem is that the population must be _____ enough to withstand disease, shortages of _____ and _____, predators, and the other hazards of living.
- The direct transfer of energy between organisms is called a food _____. When these paths of energy transfer start intertwining and becoming interrelated, they create food _____.
- Asexual reproduction produces two _____ copies of the parent cell.
- Sexual reproduction is advantageous because it increases _____ which increases the likelihood of organisms adapting to changing ecosystems.
- Human activities have disturbed the balance of many ecosystems. One way we do this is by introducing _____ or non-native species to ecosystems where they fit into a new niche or compete with a native species for an existing one.

How We Know

- Most of what we know about ancient populations comes from _____.
- Name three types of events or information that can be revealed by fossils:
 - _____

 - _____

 - _____

- Sources of error in fossil records include that some species do not easily become _____, distribution of fossils may be _____ around the world, and scientists might not have taken _____ from the right places.
- After natural disasters like forest fires, barren land experiences a _____ of species being introduced again.
 - Put the following species in order of appearance in ecological succession: small mammals, large mammals, small trees and brush plants, large trees
 - _____

- Scientists can also tell how populations change over time by studying how _____ material changes over time.

What We Know

- There are many ways to define a species. One way to define whether organisms are of the same species is by whether or not they can produce offspring that can _____.
- Many members of the same species make a _____.
- Populations can be characterized in the following ways
 - _____ - the number of individuals divided by the area of suitable environment
 - _____ - helps determine the growth of a population
 - _____ - ratio of males to females in a population
- The vast majority of species that have lived on earth are now _____.
- Each population in an ecosystem occupies a specific _____. If this niche is disturbed, the size of the population may change.
- A given population of a species has a certain distribution of genes, or gene _____. If these frequencies are changing, the species likely has a high capacity to evolve.
- The gene _____ refers to all of the genes found within a population.
- _____ isolation can isolate gene pools. This can lead to two populations of the same species evolving into separate species.
- As a population grows, the chances for evolving new species may also increase because more individuals with specific

gene frequencies are able to be acted on by
_____.

- Unless growth is limited, population growth occurs
_____. Factors that influence population
growth include: _____, _____, _____ and
_____, and _____.
- Regardless of body mass or numbers in a population, a
given mass of _____ will support a given mass of
_____. Consequently, if the numbers of prey go down,
the numbers of predators go up/down. If the numbers of
predators go down, the numbers of prey will go up/down.