**Nutrient Limitations**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – the rate in which organic matter (carbon, oxygen, nitrogen, phosphorus) is created to producers.
* When a nutrient is in short supply, it \_\_\_\_\_\_\_ how much the organisms can grow and reproduce. This is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* When an aquatic ecosystem receives a large supply of a limiting nutrient, such as runoff water from heavily fertilized fields, an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the result.

 Algal bloom- \_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Results of an Algal Bloom:
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the thick layer of algae causing plants on the bottom die
* If the plants on the bottom die, the fish and animals that eat them could \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Carrying Capacity**

* the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that can be \_\_\_\_\_\_\_\_\_\_\_ by the available resources
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ may include food, water, shelter, space, oxygen, etc.
* When the carrying capacity of an area is exceeded, populations will begin to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because there aren’t enough resources to support them.

**Limiting factors** keep populations \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* If one species is disturbed it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on the populations of other species.



**Biomagnification**, is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of a substance that occurs in a food chain

* \_\_\_\_\_\_\_\_ - a harmful pesticide often found in food chains

**Ecological Succession**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a series of changes in a community in which new populations of organisms gradually replaces existing populations.

* There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of succession:
1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – starts from bare rock
	* + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the first organisms to colonize a new site.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are pioneer organisms.



1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – Takes place on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* Populations grow again after being wiped out by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Climax Community/ Mature Community – the most stable community during succession.

 - composed of large, sturdy **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.