Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ECOLOGY GUIDED NOTES**

What is ecology? –

Biotic factors =

Abiotic factors =

* People = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Rocks = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Temperature = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Water = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Plants = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is tolerance of an organism? –

Population- Group of one species that can reproduce to form a fertile offspring.

Community-

Ecosystem- Communities + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Biosphere- The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ level of organization.

Habitat – “the address” -

Niche- “how it makes a living” –

What are some things that limit the ability of a species to grow uncontrolled? –

Producer- “autotrophs” –

Consumer – “Heterotrophs”

**Types of consumers**

1. Carnivores-
2. Omnivores-
3. Saprophytes “decomposers”
4. Herbivores

**Symbiotic Relationships-** How two organisms interact with each other.

1. Commensalism
2. Parasitism
3. Mutualism

* Lichen-

Trophic Levels – each link in a food chain. Ex. Primary producer / primary consumer / secondary consumer.

* As you move up a food chain, the amount of available energy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the biomass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

“law of 10” – each level has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the energy as the previous level.

* Ex. Primary consumers can get 10% of the original energy from the plants they eat.
  + Secondary consumers can get only 10% of that (1% of the original)

Biomagnification – ex. DDT and bald eagles –

Keystone species-

Energy \_\_\_\_\_\_\_\_\_\_\_ through an ecosystem and Nutrients \_\_\_\_\_\_\_\_\_\_ in an ecosystem

**Nutrient cycles-**

Water

Evaporation-

Transpiration-

Condensation-

Precipitation-

Carbon- exists as \_\_\_\_\_\_\_\_\_ in the atmosphere.

Photosynthesis

Cellular Respiration

Nitrogen Cycle - \_\_\_\_\_\_\_\_\_\_\_\_ of the atmosphere is made up of nitrogen (N2)

Nitrogen fixation- done by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - converts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into ammonium.

* Can also be done by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Weather –

Climate-

Green house effect-

**Population biology**

4 factors that influence Density

1. Immigration-
2. Emigration-
3. Density – Dependent Factors - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Factors that have a larger effect on bigger populations. (Affect a population of 1 million more than a population of 1 thousand).
4. Density Independent factors - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Factors that affect all population equally (Affect a population of 1 million the same as a population of 1 thousand)

Carrying capacity-

Exponential curve versus Logistic growth curve.

Ecological Succession

Primary – Begins in a place with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Pioneer Species

Secondary- Begins in a place with \_\_\_\_\_\_\_\_\_\_\_.

Climax community-

Invasive species -