Pre AP Biology 11 – Evolution

**Concept 1: Analyzing the modes of speciation (macroevolution)  (Ch 24)**

* The difference between microevolution and macroevolution
* The biological concept of species
* Prezygotic and postzygotic barriers that maintain reproductive isolation in natural populations
* How allopartic and sympatric speciation are similar and different
* How an autopolyploid or an allopolyploid chromosomal change can lead to sympatric speciation
* How punctuated equilibrium and gradualism describe two different tempos of speciation

Soooo, what does evolution mean?

**Decent with modification** – the idea that living species are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_species that were different from the present day ones. Also thought of as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_composition of a population from generation to generation.

**Macroevolution** – a change among species over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with some species dying out and new species emerging. Major biological changes evident in the fossil record.

**Microevolution** – evolution on the smallest scale. A generation to generation change in the frequencies of \_\_\_\_\_\_\_\_\_within a population.

**What defines a species?**

Biological Species Concept:

Ecological Species Concept:

Pluralistic Species Concept:

Morphological Species Concept:

Genealogical Species Concept:

Phylogenetic/Evolutionary Species Concept:

**The Biological Species Concept**

A species is a member of a population that actually or potentially \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_in nature.  It is not related to similarity of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Although appearance is helpful in identifying species, it does not define species.

**Reproductive Barriers**

Factors that impede members of two species from producing viable fertile offspring.

Hybrids form with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mating occurs.  It’s often several barriers that prevent this.

Prezygotic barriers (\_\_\_\_\_\_\_\_\_\_\_\_zygote)

Prevent mating

* Habitat isolation
* Temporal isolation
* Behavioral isolation
* Mechanical isolation
* Gametic isolation

Postzygotic Barriers (\_\_\_\_\_\_\_\_\_\_\_\_zygote)

* Reduced hybrid viability
* Reduced hybrid fertility
* Hybrid breakdown