

From Chapter 5....

Assessing biodiversity....how to measure, different types of diversity

-Species richness (number) vs. species evenness

Sources of genetic variation

Interpret evolutionary trees (cladograms)

Study the concept map of evolution...understand concepts and how terms relate

Understand difference between micro and macro evolution

Populations evolve not individuals...you can't "wish for" or "need" an adaptation

What affects rate of evolution

Speciation (macroevolution) can happen in a couple of ways:

Allopatric: involves geographic isolation...reproductive isolation...pops that no longer can interbreed.

Sympatric: best example is polyploidy (common in plants) can be used to develop new strains ex: mustard...to cauliflower ...to broccoli...to kale...to brussel sprouts...etc.

GMO's can use polyploidy or intro of non-related genes (ex: Bt corn and cotton resist bugs)

Major extinctions

What are the recent human influences causing 6th major extinction:

What things increase rate of extinction

From Chapter 6...

Organization of the biosphere...levels

Calculate r

And doubling time...rule of 70

Calculate growth rate

Logistic vs. exponential growth ...role of limiting factors

Density dependent and independent factors

Carrying capacity

r-selection vs. K-selection

survivorship curves

Predator/prey relationships (graphs)

List the key roles of keystone species in an ecosystem and examples

Role of competition...competitive exclusion...resource partitioning...interspecific interactions (symbiosis...predation...)

Niche, Niche partitioning, Niche specialists vs. generalists

Fundamental differences between primary and secondary succession?

Starts without soil

starts with soil

Takes much longer (100's-1000's yrs)

takes less time (decades)

Pioneers are lichen and mosses

Pioneers: sun-tolerant trees, weeds,etc.

Main hypotheses behind the Theory of Island Biogeography... Biodiversity on islands is related to what 2 variables? (size and distance)