1. Biodiversity Issues
2. Be able to define biodiversity include all the components of biodiversity
   1. Genetic
   2. Species
   3. Habitat
3. Relate natural selection, evolution, and biodiversity
   1. Include the role of plate tectonics and geographic isolation
   2. Define species
   3. Discuss the role of environmental pressure on speciation
4. Biodiversity hotspots—where are they located on the globe?
5. Resiliency
   1. Be able to illustrate the difference between a resilient ecosystem and a vulnerable ecosystem
6. Measuring species diversity
7. Memorize the Simpson’s Diversity Index
8. Know how and when to use the Diversity Index
9. What is the index telling us? When is it appropriate to use?
10. Threats to biodiversity
    1. What human impacts are causing species to go extinct or endangered?
    2. Be familiar with the Red List and the IUCN
       1. Why are some organisms more prone to extinction than others?
       2. What are the levels of risk of extinction?
11. Conservation of biodiversity
    1. Know the different approaches to conservation
       1. Species-based
       2. Habitat-based
    2. Evaluate the different approaches and be familiar with the organizations that use each approach, for example CITES uses the species-based approach. Nature Conservancy buys up lots of land so they use the habitat-based approach.
    3. Define keystone species, umbrella species, and flagship species and explain that these kinds of species are used in the species based approach.
    4. Evaluate management of protected areas
       1. Is it best to have lots of small areas or one big area?
       2. How do different shapes of protected areas affect efficiency of conservation?
       3. Etc.
    5. Know the difference between IGO, NGO, and GO and the logos of the different organizations.
12. Importance of biodiversity
    1. Be able to communicate WHY we should conserve biodiversity.