

Species Diversity

Species Diversity includes the number of different species and relative numbers of each.

↖ a number

Species Diversity
→ how many kinds of organisms are there?

→ how many of each kind do you see?
→ combine using a formula to calculate diversity



<http://www.egurucool.com/images/is/imgRep/82/1213/4.jpg>

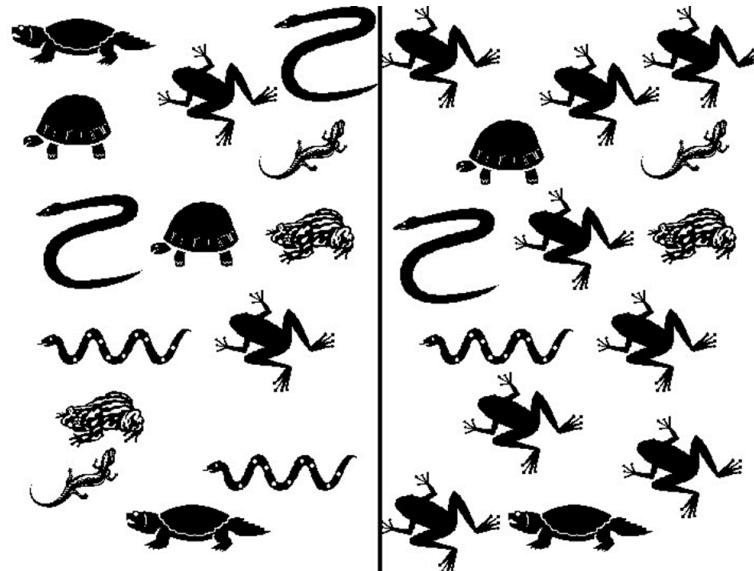
Species Richness and Species Evenness

Species richness:

How many different kinds of organisms are in an area

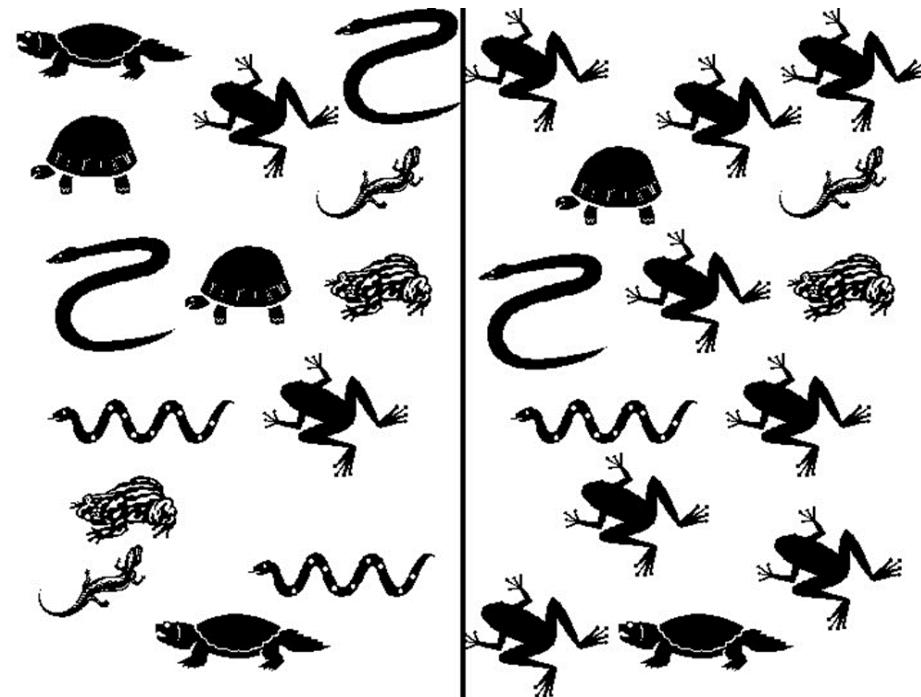
Species evenness:

Compares the population of the different organisms



<http://www.egurucool.com/images/is/imgRep/82/1213/4.jpg>

7 kinds 7 kinds
(2 of each) (8 frogs, 1 of rest)



In this slide the species richness in both ecosystems is 7 but the evenness is different in each. The second ecosystem has many more frogs and fewer snakes and salamanders than the first.

Keystone Species

Keystone Species: a species within the ecosystem that is vital (either directly or indirectly) to almost all other species in the ecosystem. If a keystone species is removed from an ecosystem, the structure of the ecosystem changes.



<http://kelewis.com/images/animation/animation3a.jpg>

Keystone species
Play a more important role in maintaining
diversity than other species

Species Diversity- Why do we care?

- Measure of the health of an ecosystem
 - > More species = healthier ecosystem
- Human benefits
 - > Air quality
 - > Water quality
 - > Disease control
 - > Pest control
 - > pollination



<http://lorennosdo.blogspot.com/2014/02/b-i-o-d-i-v-e-r-s-i-t-y-biodiversity-is.html>



Over the next 2+ weeks, we'll be:

- Looking at different areas in the creek
- Collecting macroinvertebrates
- Evaluating the diversity of these areas
- Relate the diversity we find to the quality of water in those spots *

* this is an ecological study!

Your posts •

- Allow us to identify the different kinds of organisms \star ACCURACY IS CRITICAL
- Allow us to determine the water quality requirements of the organisms
 \star ACCURACY IS CRITICAL