

NAME: _____ DATE: _____ CLASS PERIOD: _____

STUDENT NOTES SHEET: SPECIES, SPECIATION, AND HELLBENDER TAXONOMY

Part 1: What is a Species?

Summarize three key points from the video that we just watched.

- 1.
- 2.
- 3.

Part 2: Islands in the Sky

Appalachian salamander diversity

- More species of salamanders in Appalachia - _____ of all species – than in any other place in the world!
- Why do we live in such a hotspot? What is it about Appalachia that gives rise to so many species?
 - _____ - seasonal temperatures, _____, etc.
 - Elevation
 - _____

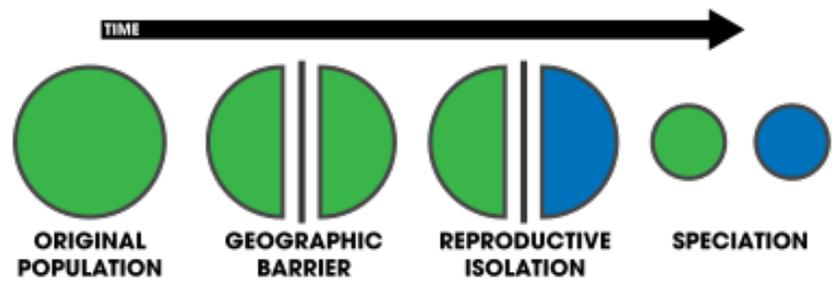


What is it about mountains?

- For salamanders, mountains are like _____!

This is called _____.

- When two populations of the same species become separated by a _____.
- Over long periods of time _____ (_____ isolation), those populations accumulate _____ differences



The importance of biodiversity

- If there are plenty of plants and animals, why should we worry about how many **different species** there are?
- Remember that different species fulfill _____ in ecosystems – their ecological _____
- The more species there are, the more niches are being filled – the more _____ an ecosystem is (and the more _____ it provides to humans!)

So, where do hellbenders fit in?

Kingdom: Animalia

Phylum: Vertebrate

Class: Amphibia

Order: Caudata

Family: Cryptobranchidae

Genus and species: *Cryptobranchus alleganiensis*

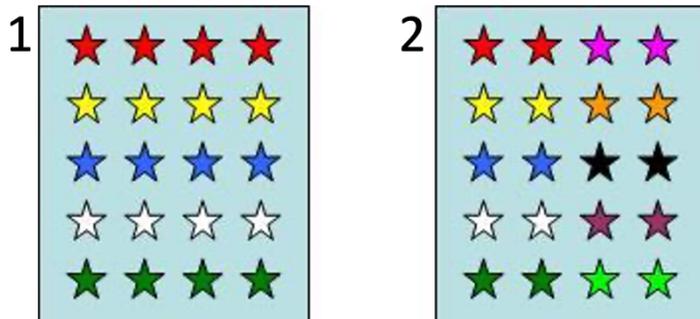
Can you name a few other amphibians? _____

Are hellbenders more closely related to lizards or frogs? _____ How do you know?

How do we calculate diversity? Let's say we just go by how many different species there are in an area. Is this a good way to measure how "diverse" an area is? Why or why not?

Species Richness

_____ = species richness



Which community has a higher species richness?

1 OR 2

How about this one?

1 OR 2

1



2



But which one would you say is more diverse?

1 OR 2

Species evenness

- How “_____” each species is (how many individuals of each species there are) = species evenness

1



2



Community _____ has a higher species evenness!