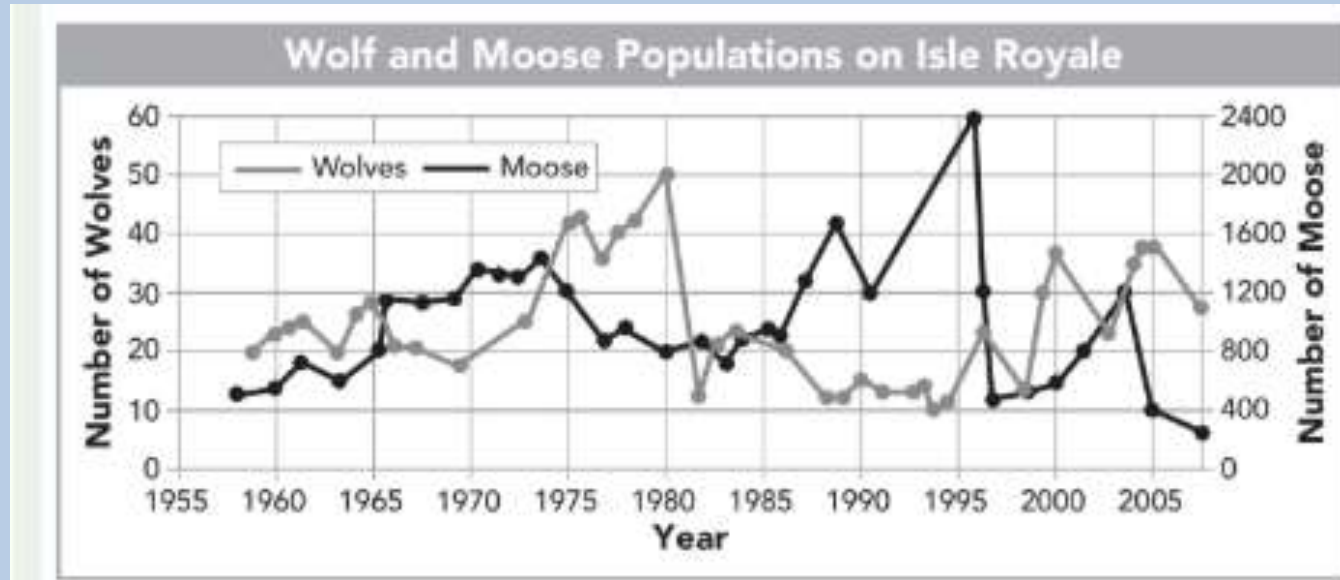
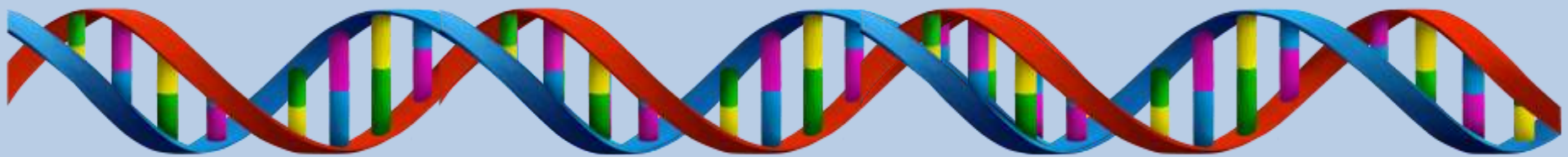


1. Explain the marked points on the graph



2. Is it more beneficial to have high or low biodiversity? Why?



Logistics

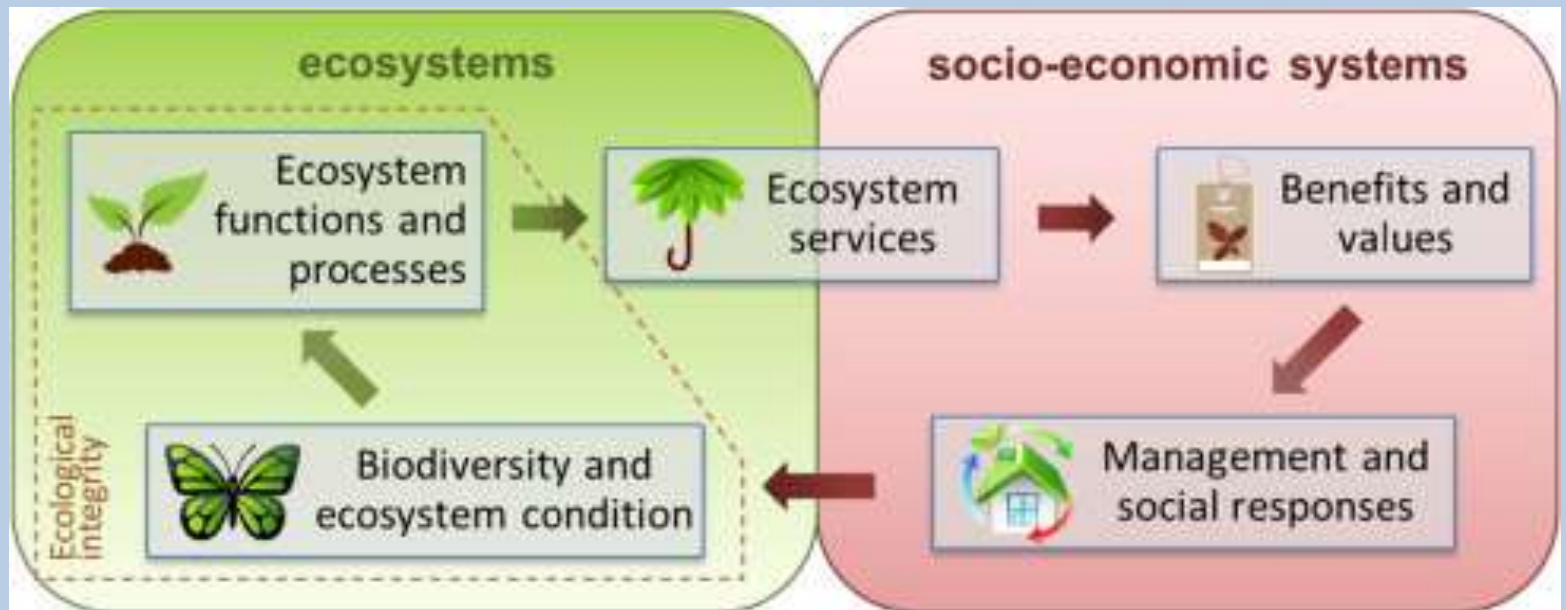
- **Unit 2 Ecology Assessment is on THURSDAY, Nov 7th**

Biodiversity

- **The variety and variation of plants, animals, and microorganisms in an ecosystem.**

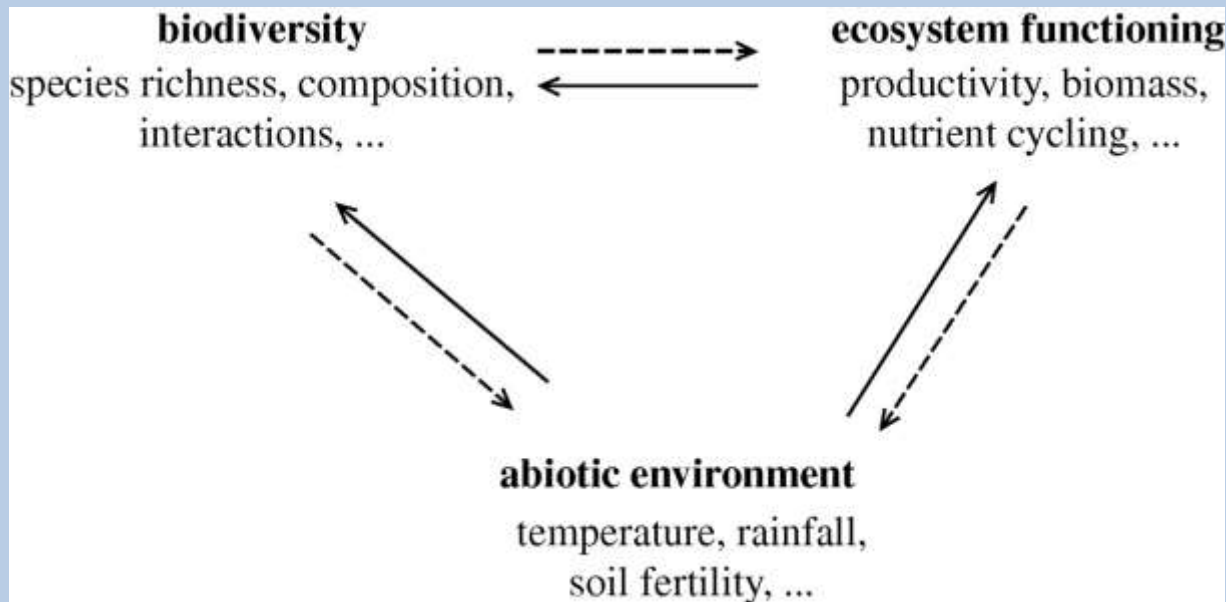
Biodiversity

- The **MORE** biodiversity there is the **MORE** interactions there are, and the ecosystem will be **MORE** stable and **RESILIENT**



Biodiversity

- The more biodiversity there is the more interactions there are, and the ecosystem will be more stable and **RESILIENT***



****able to withstand change***

Keystone Species

- The strangler fig in rainforest ecosystems!



Remember:

- **Keystone species have a great impact on their environment relative to their abundance**

Biodiversity

- **Niche = Job that is unique to each organism in the environment (*usually based on what it eats*)**

Biodiversity

- Competitive exclusion principle:
no two species can occupy exactly the same niche in exactly the same habitat at exactly the same time.

Biodiversity

- What would happen if we introduced a second predator with the same niche as the fox into our foxes and bunnies lab?

Competitive exclusion!

Biodiversity

- **Ecosystem services: benefits provided by a healthy ecosystem**
- **When every niche (job) in an ecosystem is filled by an organism, then the ecosystem is healthy and provides benefits (to humans)**

Biodiversity

- Ecosystem services

Services Provided and Examples

Purifying water

Wetlands and intact forests along rivers and around reservoirs filter and clean groundwater. Preserving buffer zones that perform these natural processes is significantly cheaper than building water-purification plants.



Buffering effects of weather

Mangrove forests protect tropical shorelines from erosion by storm waves and runoff. Dune grasses and salt marsh grasses do the same in temperate regions.



Pollinating

Bees, flies, and butterflies pollinate crop plants, including fruit trees and vegetables. Beetles, bats, and hummingbirds pollinate many other important plants.



Food production

Highly productive ocean areas provide large fishes, such as tuna, with food and space to thrive. Many wild plants may also produce food for humans.



Nutrient cycling

Healthy, actively growing forests remove carbon dioxide from the atmosphere. Bacteria and fungi also take up nitrogen and fix it into organic compounds.



Maintaining soil structure

Detritivores and other soil organisms aerate soil and prevent it from becoming too compacted. Bacteria and fungi in soil as well as leaf litter microbiomes produce humus.



Regulating pests

Many species of birds and bats eat insects like mosquitoes that can spread disease. These and other predators also eat crop-damaging insects.



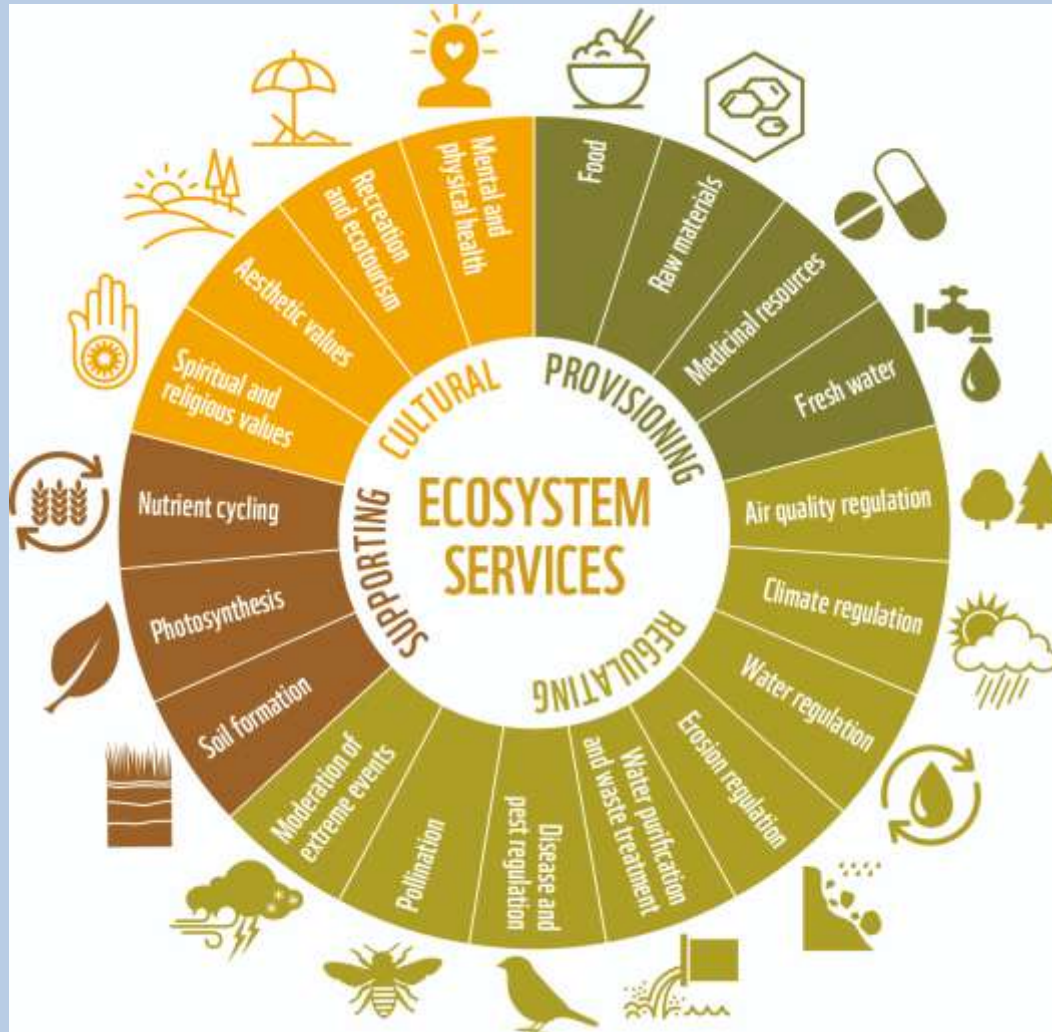
Biodiversity

- Ecosystem services



Biodiversity

- Ecosystem services



Biodiversity

- Ecosystem services



Keystone Species

- **What ecosystem service do sea otters provide?**

Logistics

- **Study your objectives**
 - **Cross out objective 16,17**
- **Turn in missing assignments**
- **Finish your algae wrap-up and self-assessment rubric**
- **Finish your foxes and bunnies graph**

Logistics

- **Take this survey before you leave class so I can better help you prepare for your test!**

