Biodiversity Notes Name _____

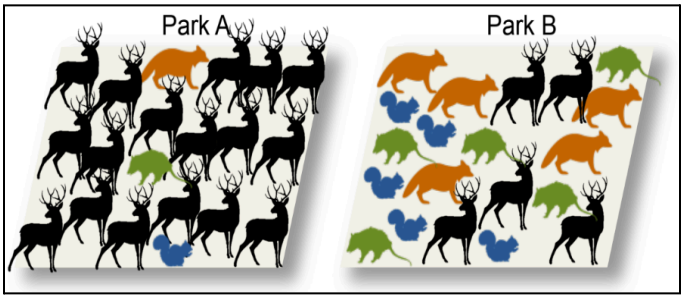
Biology Date _____ Hour _____

Biodiversity in Ecology

- **Ecology**: The study of _____ between _____ and their _____
- **Biodiversity**: _____ of life in a _____
- Three Factors contribute to global biodiversity

  1. _____ diversity 2. _____ diversity 3. _____ diversity

What contributes to biodiversity?

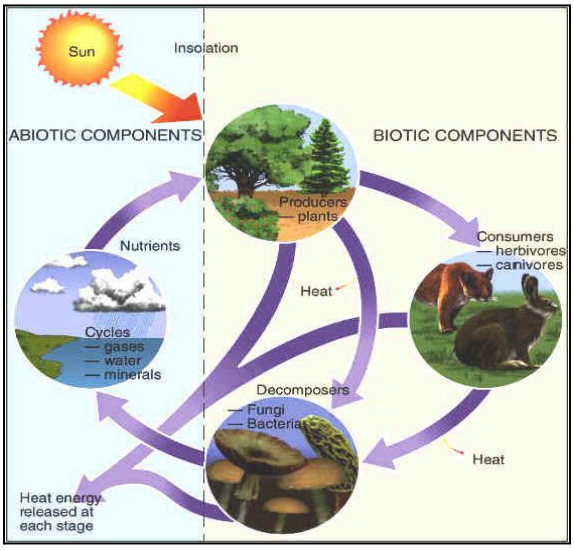


Which of the parks has greater species richness? _____

Which of the parks has greater species evenness? _____

Which of the parks has greater biodiversity? _____

1. **Species Diversity**: The _____ of _____
   - **Species Richness**:_____ _____
   - **Species Evenness**: _____ _____
2. **Genetic Diversity**: The _____ of _____ that can be _____ by offspring in a population.
3. **Ecosystem Diversity**: The interaction of _____ & _____ factors which support _____ of _____
   - **Biotic Factors:** All _____ organisms inhabiting the earth (biosphere).
   - **Abiotic Factors:**_____ parts of the environment.
     - *Examples: temperature, soil, light, moisture, air currents, minerals, rocks….*



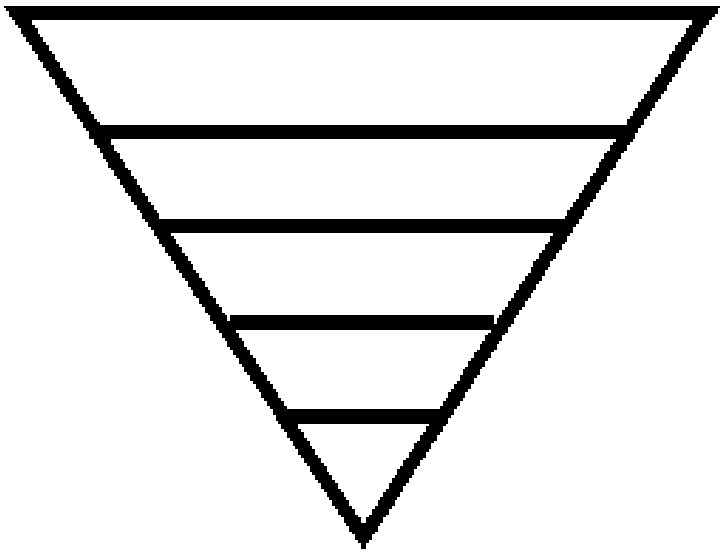
Importance of Biodiversity

- **Ecological:** _____ and supports _____
  - *Examples: Photosynthesis, water purification*
- **Aesthetic:** _____
  - *Examples: forests are beautiful. People go hiking to enjoy the stunning views nature provides.*
- **Economic:** _____ are _____ from _____
  - *Examples: Medicines, shelter, oxygen, fertile soil…*

Threats to Biodiversity

- _____ (*Like in Thin Green Line*) reduce biodiversity
  - *Reduced biodiversity may have a serious, negative, and long-term impact on the earth (biosphere).*
- **Extinction:** Disappearance of a _____ when the last member _____
  - **Endangered species** - Numbers are _____ and likely to go _____
- **Background Extinction:** _____ gradual enough for the _____ to _____ the changes.
  - This is _____ a threat to biodiversity.
    - *Background rate of extinction = 1 species per million per year*
    - *Current levels of background extinction are are 1000x the normal background rate*
- **Mass Extinction:** Event where a _____ _____ of species are _____ in a relatively short amount of time.
  - *"Past mass extinctions were caused by extreme temperature changes, rising or falling sea levels and catastrophic, one-off events like a huge volcano erupting or an asteroid hitting Earth." (www.nhm.ac.uk)*
- **Invasive (Exotic/Introduced) Species**
  - _____ that are _____ _____ to a community
  - _____ grow exponentially and _____ _____ native organisms
  - Can lead to _____ of native organisms

Biological Levels of Organization



- **Biosphere:** The life supporting portions of Earth composed of _____, _____, _____,and _____
  - *The highest/largest level of organization.*
  - *The biosphere is composed of many Biomes*
- **Ecosystem:** All _____ and _____ components interacting with _____
  - Biotic - _____ organisms in an ecosystem.
    - *Examples: bacteria, tigers, paramecium, sunflowers….*
  - Abiotic - _____ elements of an ecosystem
    - *Examples: rocks, soil, water, sunlight, weather...*
- **Community:** Interacting _____ that inhabit a _____ and are _____
  - *AKA all biotic components in an ecosystem*

Fill in the pyramid above with the diff. levels of organization

- **Population:** A group of individual organisms of the _____ _____ living in the same place with the ability to _____.
- **Organism:** Anything exhibiting all of the _____ of life as an _____
  - *The lowest/smallest level of organization in ecology*